Husqvarna

HUSQVARNA AUTOMOWER®
305/308
OPERATOR'S MANUAL

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MEMO

Serial number: _____

PIN code: _____

Dealer: _____

Dealer's telephone number: _____

In the unlikely event that the mower is stolen, it is important to notify the dealer of this. Provide the serial number of the mower so that it can be registered as stolen in the central systems at Husqvarna AB. It is an important step in theft prevention, discouraging interest in the buying and selling of stolen mowers.

The product's serial number is nine digits and is shown on the product rating plate and the product's packaging.

www.automower.com

1. Introduction and safety

1.1 Introduction

Congratulations on your choice of an exceptionally high quality product. To get the best results from your Husqvarna robotic lawnmower requires knowledge of its function. This operator's manual contains important information about the robotic lawnmower, how it must be installed and how to use it.

As a complement to this Operator's Manual, there is more information available on the Automower® website, www.automower.com. Here you can find more help and guidance in its use.

www.automower.com

Husqvarna AB has a policy of continuous product development and therefore reserves the right to modify the design and appearance and function of products without prior notice.

The following system is used in the Operator's Manual to make it easier to use:

- Text written in *italics* is a text that is shown on the robotic lawnmower's display or is a reference to another section in the Operator's Manual.
- Words written in **bold** are one of the buttons on the robotic lawnmower's keypad.
- Words written in *UPPERCASE* and *italics* refer to the position of the main switch and the different operating modes available in the robotic lawnmower.

IMPORTANT INFORMATION

Please read the Operator's Manual carefully and make sure you understand the instructions before using the robotic lawnmower.

1001-003

WARNING

The robotic lawnmower can be dangerous if incorrectly used.

1.2 Symbols on the product

These symbols can be found on the robotic lawnmower. Study them carefully.

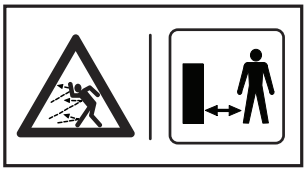
- Please read the Operator's Manual carefully and make sure you understand the instructions before using the robotic lawnmower. The warnings and safety instructions in this Operator's Manual must be carefully followed if the robotic lawnmower is to be used safely and efficiently.

1001-002, 1001-003

- The robotic lawnmower can only start when the main switch is set to *1* and the correct PIN code has been entered. Turn the main switch to *0* before carrying out any inspections and/or maintenance.

3012-663, 3012-1085

- Remain at a safe distance from the robotic lawnmower when it is running. Keep your hands and feet away from the rotating blades. Never put your hands or feet close to or under the body when the robotic lawnmower is running.



3018-066

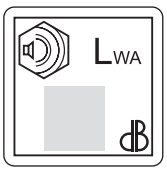
- Do not ride on the robotic lawnmower.

3012-665

- This product conforms to the applicable EC Directives.

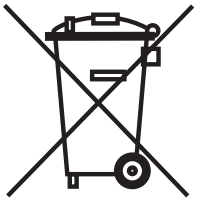
6001-024

- Noise emission to surroundings. The product's emissions are set out in chapter 10, Technical data and on the rating plate.



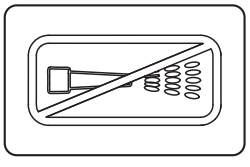
3012-1059

- It is not permitted to dispose of this product as normal household waste when it has reached the end of its useful life. Ensure that the product is recycled in accordance with local legal requirements.



3012-689

- Never use a high-pressure washer or even running water to clean the robotic lawnmower.

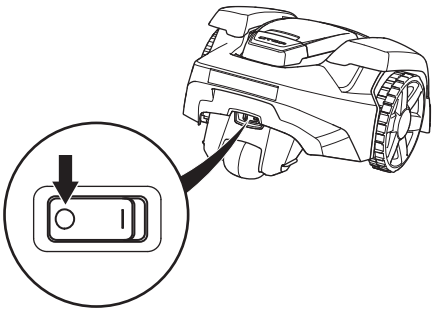


3018-062

1.3 Symbols in the Operator's Manual

These symbols can be found in the Operator's Manual. Study them carefully.

- Turn the main switch to *0* before carrying out any inspections and/or maintenance.

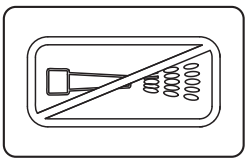


3012-1023

- Always wear protective gloves when working with the robotic lawnmower's chassis.

3012-272

- Never use a high-pressure washer or even running water to clean the robotic lawnmower.



3018-062

- A warning box indicates the risk of personal injury, especially if the instructions are not followed.

WARNING

Text

- An information box indicates the risk of material damage, especially if the instructions are not followed. The box is also used where there is a risk of user error.

IMPORTANT INFORMATION

Text

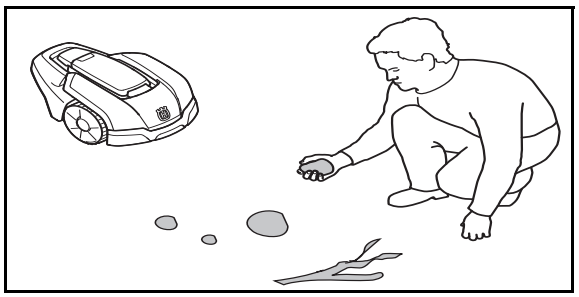
1. INTRODUCTION AND SAFETY

1.4 Safety Instructions

Use

1001-003

- This robotic lawnmower is designed to mow grass in open and level ground areas. It may only be used with the equipment recommended by the manufacturer. All other types of use are incorrect. The manufacturer's instructions with regard to operation, maintenance and repair must be followed precisely.
- The robotic lawnmower may only be operated, maintained, and repaired by persons that are fully conversant with its special characteristics and safety regulations. Please read the Operator's Manual carefully and make sure you understand the instructions before using the robotic lawnmower.
- It is not permitted to modify the original design of the robotic lawnmower. All modifications are made at your own risk.
- Check that there are no stones, branches, tools, toys or other objects on the lawn that can damage the blades and cause the mower to stop.



3012-961

- Start the robotic lawnmower according to the instructions. When the main switch is in position *1*, make sure you keep your hands and feet away from the rotating blades. Never put your hands and feet under the robotic lawnmower.
- Never lift up the robotic lawnmower or carry it around when the main switch is in position *1*.
- Do not let persons who do not know how the robotic lawnmower works and behaves use the robotic lawnmower.

3012-663

- Never use the robotic lawnmower if persons, especially children, or pets, are in the immediate vicinity.
- Do not put anything on top of the robotic lawnmower or its charging station.
- Do not allow the robotic lawnmower to be used with a defective blade disc or body. Neither should it be used with defective blades, screws, nuts or wires.
- Do not use the robotic lawnmower if the main switch does not work.
- Always switch off the robotic lawnmower using the main switch when not in use. The robotic lawnmower can only start when the main switch is set to *1* and the correct PIN code has been entered.

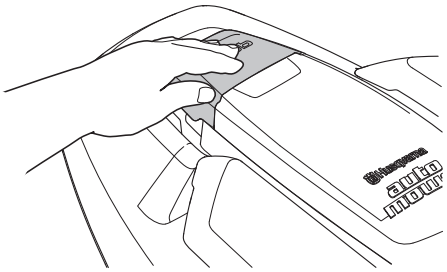
- The robotic lawnmower must never be used at the same time as a sprinkler. In this case use the timer function (see *6.3 Timer* on page 44) so the robotic lawnmower and sprinkler never run simultaneously.
- Full compatibility cannot be guaranteed between the robotic lawnmower and other types of wireless systems such as remote controls, radio transmitters, hearing loops, buried electric animal fencing or similar.
- Metal objects in the ground (e.g. reinforced concrete or anti-mole nets) can result in a stoppage. The metal objects can cause interference with the loop signal which then can lead to a stoppage.

Transport

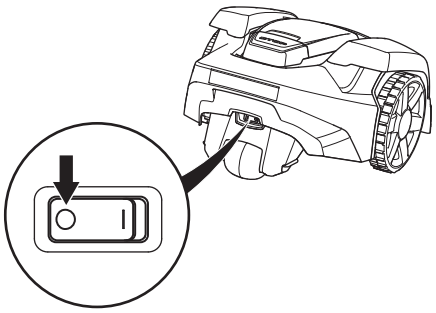
The original packaging should be used when transporting the robotic lawnmower over long distances.

To safely move from or within the working area:

1. Press the **STOP** button to stop the robotic lawnmower. If security is set to the medium or high level (see *6.5 Security* on page 49), the PIN code has to be entered. The PIN code contains four digits and is selected when you start the robotic lawnmower for the first time. See *3.8 First start-up and calibration* on page33.
2. Set the main switch in position *0*.

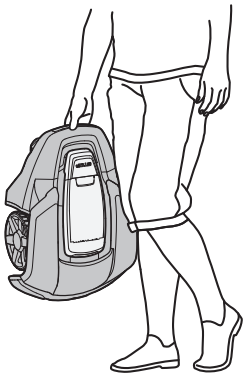


3012-963



3012-1023

3. Carry the robotic lawnmower by the handle found at the rear under the robotic lawnmower. Carry the robotic lawnmower with the blade disc away from the body.



3012-1052

IMPORTANT INFORMATION

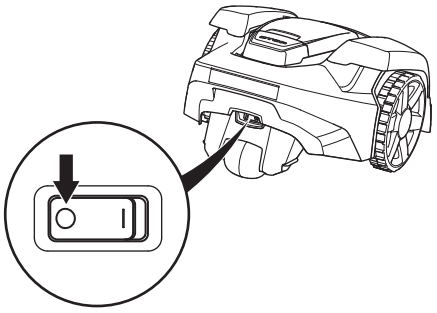
Do not lift the robotic lawnmower when it is parked in the charging station. This may damage the charging station and/or the robotic lawnmower. Open the cover and instead first pull the robotic lawnmower out of the charging station before lifting it.

Maintenance

WARNING

When the robotic lawnmower is turned upside down the main switch must always be in the *0* position.

The main switch should be in the *0* position during all work on the robotic lawnmower's chassis, such as cleaning or replacing the blades.



- Inspect the robotic lawnmower each week and replace any damaged or worn parts.

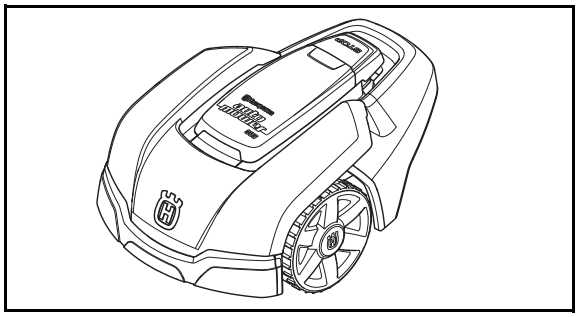
  Check especially that the blades and blade disc are not damaged. Replace all blades and screws at the same time if necessary so that the rotating parts are kept balanced. See *8.7 Blades* on page 60.

2. Presentation

This chapter contains information that is important to be aware of when planning the installation.

Installing a Husqvarna robotic lawnmower involves four main components:

- A robotic lawnmower that mows the lawn by essentially operating in a random pattern. The robotic lawnmower is powered by a maintenance-free battery.

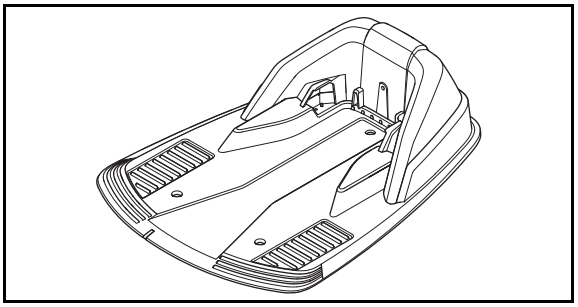


3012-964

- Charging station, where your robotic lawnmower returns when the charge level in the battery becomes too low.

  The charging station has three functions:

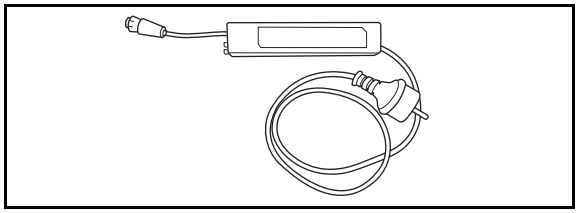
  - To send control signals along the boundary wire.
  - To send control signals along the guide wire so that the robotic lawnmower can find the charging station.
  - To charge the robotic lawnmower battery.



3012-965

- A transformer, which is connected between the charging station and a 230 V wall socket. The transformer is connected to the wall socket and to the charging station using a 10 m long low voltage cable. The low voltage cable must not be shortened or extended.

  A 20 meter low voltage cable is available to purchase as an accessory. Please contact your dealer for more information.

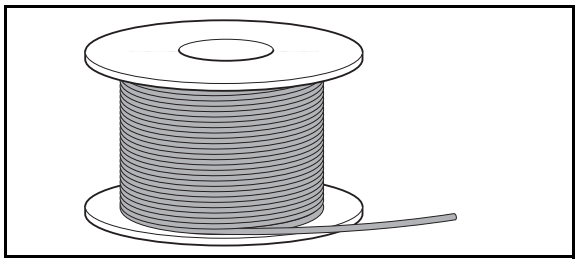


3018-063

- Loop wire, laid in a loop around the robotic lawnmower's working area. The loop wire is laid around the edges of the lawn and around objects and plants that the robotic lawnmower must not run into. The loop wire is used both as a boundary wire and a guide wire.

  The loop wire supplied for the installation is 200 m long (150 m for the Automower® 305). If it is not long enough, more loop wire can be purchased and spliced onto the existing loop wire with an original coupler.

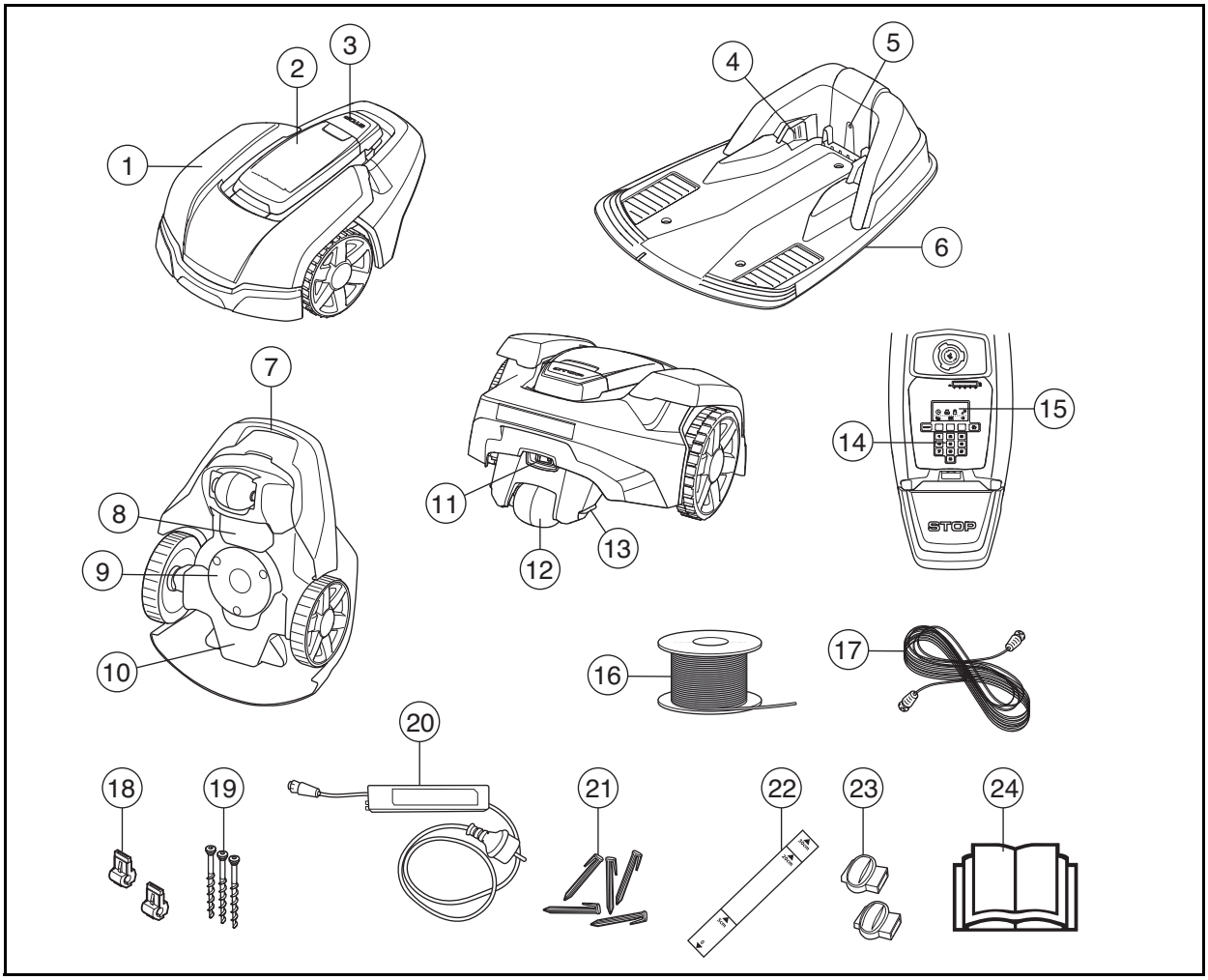
  The maximum permitted length for the loop wire is 250 m.



3012-221

2. PRESENTATION

2.1 What is what?



3012-1024

The numbers in the illustration represent:

1. Body
2. Cover to display, keypad and cutting height adjustment
3. Stop button/Catch to open the cover
4. Contact strips
5. LED for operation check of the charging station, boundary wire and guide wire
6. Charging station
7. Carry handle
8. Battery cover
9. Blade disc
10. Chassis box with electronics, battery and motors
11. Main switch
12. Rear wheel
13. Charging strip
14. Keypad
15. Display
16. Loop wire for boundary loop and guide wire
17. Low voltage cable
18. Connector for connecting the loop wire to the charging station
19. Screws for securing the charging station
20. Transformer
21. Staples
22. Measurement gauge for help when installing the boundary wire (the measurement gauge is broken loose from the box)
23. Coupler for the loop wire
24. Operator's Manual

2.2 Function

Capacity

The robotic lawnmower is recommended for lawns up to 800 m² (500 m² for Automower® 305).

How big an area the robotic lawnmower can keep cut depends primarily on the condition of the blades and the type, growth and moisture of the grass. The shape of the garden is also significant. If the garden mainly consists of open lawns, the robotic lawnmower can mow more in one hour than if the garden consists of several small lawns separated by trees, flower beds and passages.

A fully charged robotic lawnmower mows for 40 to 60 minutes, depending on the age of the battery and how thick the grass is. Then the robotic lawnmower will charge for 60 to 90 minutes. The charging time can vary depending on, among other factors, the ambient temperature.

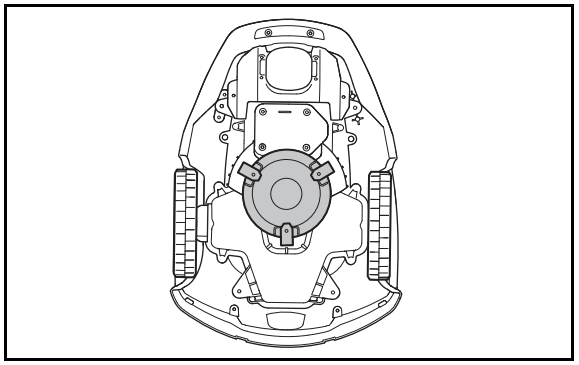
Mowing technique

The Husqvarna mowing system is based on an efficient and energy saving principle. Unlike many standard lawnmowers, the robotic lawnmower cuts the grass instead of knocking it off.

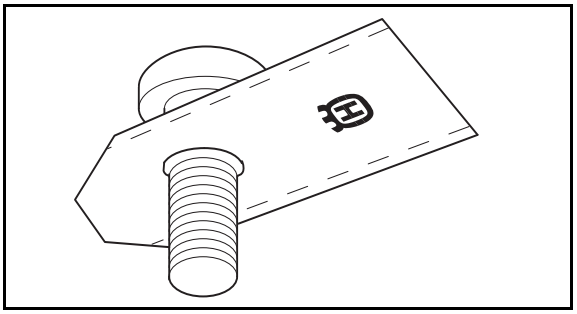
We recommend you allow the robotic lawnmower to mainly mow in dry weather to obtain the best possible result. The robotic lawnmower can also mow in the rain, however, wet grass easily sticks on the robotic lawnmower and there is a greater risk of slipping on steep slopes.

The blades must be in good condition to obtain the best mowing result. In order to keep the blades sharp for as long as possible it is important to keep the lawn free from branches, small stones and other objects.

Replace the blades regularly for the best mowing result. It is very easy to replace the blades. See *8.7 Blades* on page 60.



3012-1025



3020-002

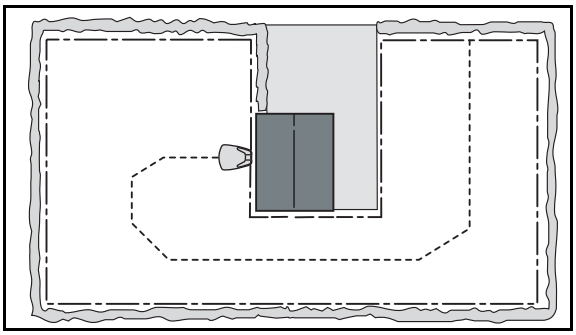
2. PRESENTATION

Working method

The robotic lawnmower automatically mows the lawn. It continuously alternates between mowing and charging.

The robotic lawnmower starts to search for the charging station when the battery charge becomes too low. The robotic lawnmower does not mow when it is searching for the charging station.

When the robotic lawnmower searches for the charging station, it first searches irregularly for the guide wire. Then it follows the guide wire to the charging station, turns around just in front of the station and backs into it.

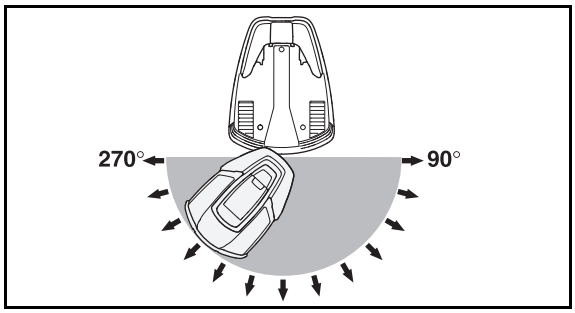


3012-1026

When the battery is fully charged, the robotic lawnmower leaves the charging station in a randomly selected direction within the 90°-270° exit sector.

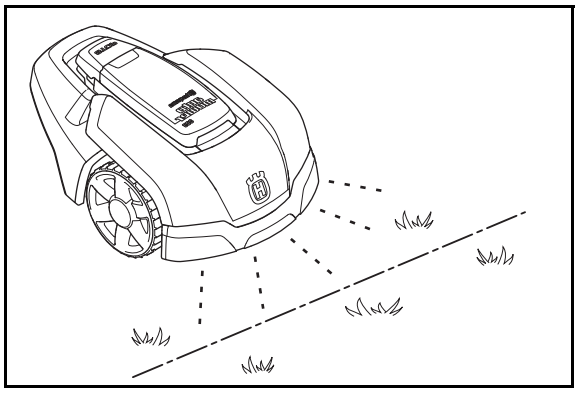
In order to ensure an even cut, even in parts of the garden that are hard to reach, there are a number of manual settings for how the robotic lawnmower is to leave the charging station. See *6.4 Installation*.

When the robotic lawnmower body hits an obstacle, the robotic lawnmower reverses and selects a new direction.



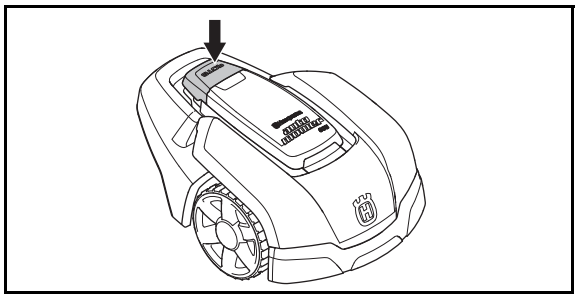
3012-928

Two sensors, one on the front and one on the back of the robotic lawnmower, will sense when the robotic lawnmower is approaching the boundary wire. The robotic lawnmower travels up to 28 centimetres beyond the wire before it turns around.



3012-927

The **STOP** button on the top of the robotic lawnmower is mainly used to stop the robotic lawnmower when it's running. When the **STOP** button is pressed a cover opens, behind which there is a control panel. The **STOP** button remains pressed in until the cover is closed again. This acts as a start inhibitor.



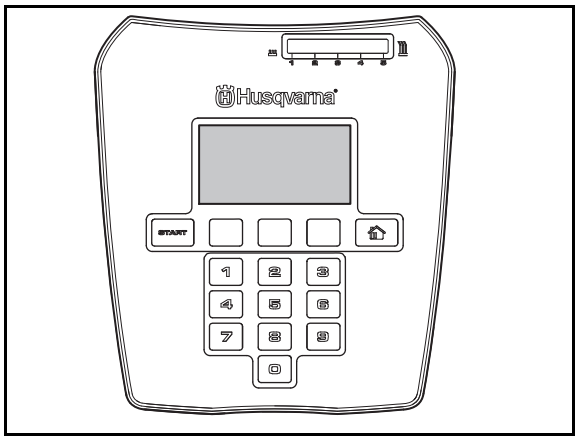
3012-929

2. PRESENTATION

The control panel on the top of the robotic lawnmower is where you manage all the robotic lawnmower settings. Open the control panel cover by pressing down the **STOP** button.

When the main switch is set to position *1* for the first time, a start-up sequence begins which includes language selection, time format, date format and the four-digit PIN code and setting the time and date. See *3.8 First start-up and calibration* on page 33.

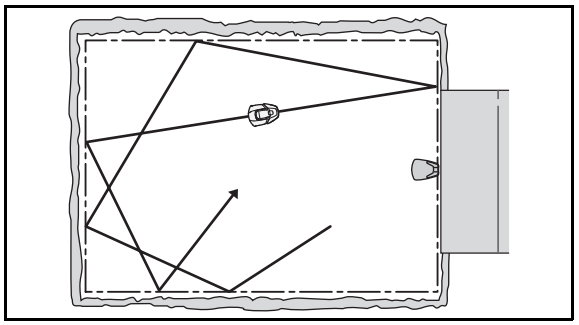
After this, the selected PIN code must be entered every time the main switch is set to *1*. See *6.5 Security* on page 49 for more information on anti-theft protection.



3012-983

Movement pattern

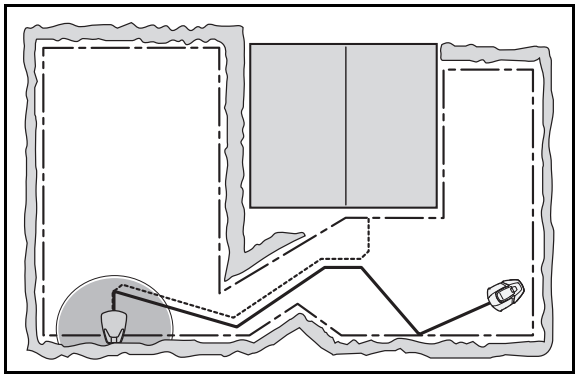
The movement pattern of the robotic lawnmower is random and is determined by the mower itself. A movement pattern is never repeated. With the mowing system the lawn is mown equally without any mowing lines from the robotic lawnmower.


3012-967

Locating the charging station

The robotic lawnmower moves in a random pattern until it reaches the guide wire. Then the robotic lawnmower follows the guide wire to the charging station.

The guide wire is a wire that is laid from the charging station towards, for instance, a remote part of the working area or through a narrow passage to be then connected with the boundary loop. For further information, see *3.6 Installation of the guide wire*.


3012-969

3. Installation

This chapter describes how to install the Husqvarna robotic lawnmower. Before starting the installation read the previous chapter *2. Presentation*.

Read also through this entire chapter before beginning the installation. How the installation is done also affects how well the robotic lawnmower works. It is therefore important to plan the installation carefully.

Planning is simplified if you make a sketch of the working area, including all obstacles. This makes it easier to see the ideal positions for the charging station, the boundary wire and the guide wire. Draw on the sketch where the boundary and guide wires should be routed.

In the *7. Garden examples* chapter, there are examples of installations.

Visit also www.automower.com for further descriptions and tips regarding installation.

Carry out the installation in the following steps:

3.1 Preparations

3.2 Installation of the charging station

3.3 Charging the battery

3.4 Installation of the boundary wire.

3.5 Connecting the boundary wire.

3.6 Installation of the guide wire

3.7 Checking the installation.

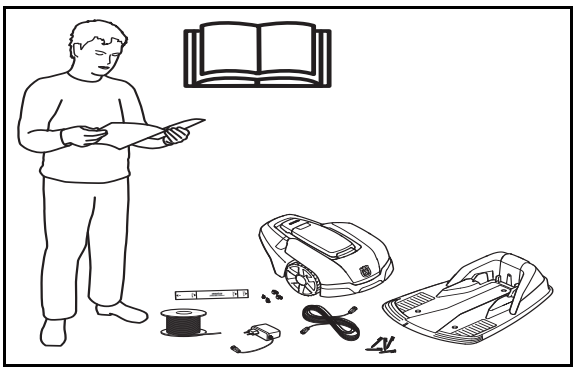
3.8 First start-up and calibration

3.9 Test docking with the charging station

The charging station, boundary loop and guide wire must be connected to be able to carry out a complete start-up.

3.1 Preparations

1. If the lawn in the working area is longer than 10 cm, mow it using a standard lawnmower. Then collect the grass.
2. Read carefully through all the steps before the installation.
3. Check that all parts for the installation are included. The numbers in brackets refer to the component illustration *2.1 What is what?*.
   - Operator's Manual (24)
   - Robotic lawnmower
   - Charging station (6)
   - Loop wire for boundary loop and guide wire (16)

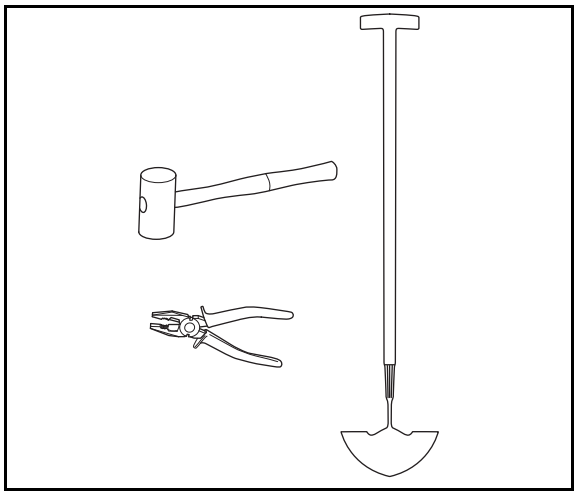


3012-930

- Transformer (20)
- Low voltage cable (17)
- Staples (21)
- Connector for connecting the loop wire to the charging station (18)
- Screws for the charging station (19)
- Measurement gauge (22)
- Couplers for the loop wire (23)

During installation you will also need:

- Hammer/plastic mallet (to simplify putting the staples in the ground).
- Combination pliers for cutting the boundary wire and pressing the contact strips together.
- Edge cutter/straight spade if the boundary wire must be buried. Installation of the charging station.



3018-057

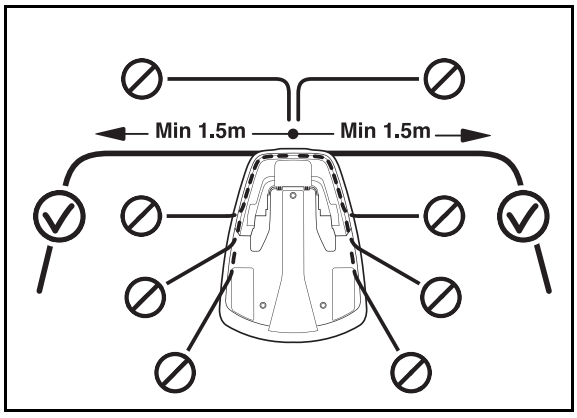
3.2 Installation of the charging station

Ideal position for the charging station

Take the following aspects into consideration when identifying the best location for the charging station:

- Allow for 3 metres of free space in front of the charging station.
- It must be possible to lay at least 1.5 metres of boundary wire straight out to the right and left of the charging station.
- It must be close to a wall socket The supplied low voltage cable is 10 metres long.
  A 20 meter low voltage cable is available to purchase as an accessory. Please contact your dealer for more information.
- A level surface to place the charging station on.
- Protection from water spray for instance from irrigation.
- Protection from direct sunlight.
- Place in the lower part of a working area that has a major slope.

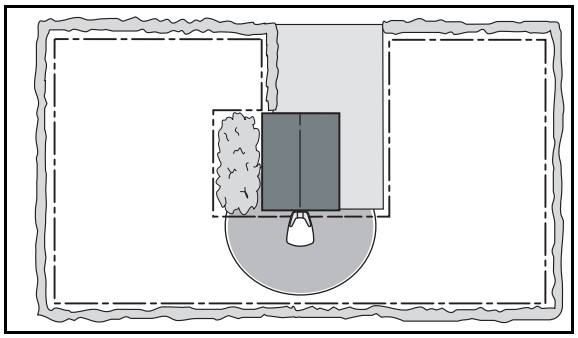
For an example of an ideal position of the charging station, see *7. Garden examples* on page 53.



3018-072

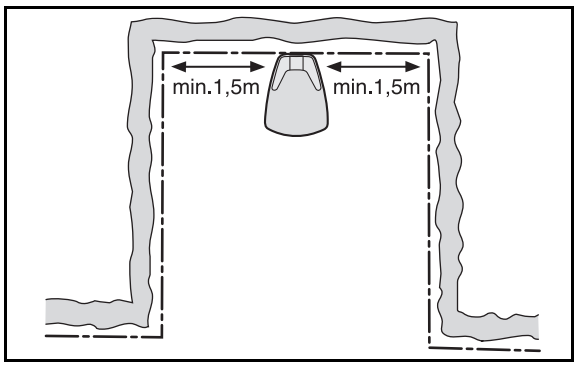
3. INSTALLATION

The charging station must be positioned with a great deal of free space in front of it (at least 3 metres). It should also be centrally placed in the working area to make it easier for the robotic lawnmower to reach all areas in the working area.



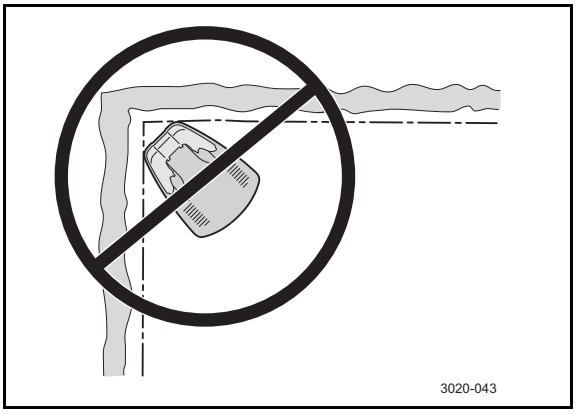
3012-931

Do not put the charging station in confined spaces in the working area. There must be a straight boundary wire, at least 1.5 metres long, to the right and left of the charging station. The wire must be laid straight out from the rear end of the charging station. Any other locations can mean that the robotic lawnmower enters the charging station sideways and will have difficulty docking.



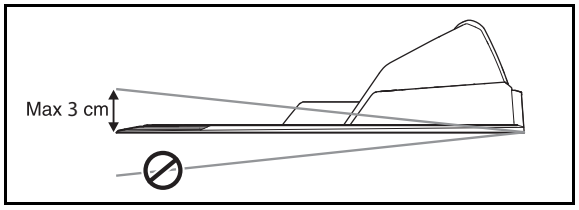
3018-067

Do not put the charging station in a corner in the working area.



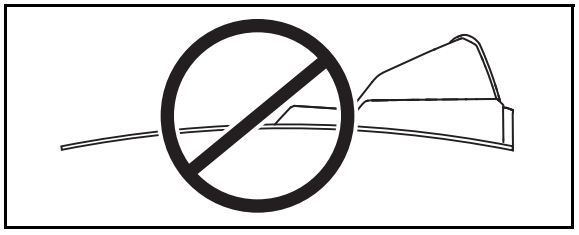
3020-043

The charging station must be positioned on relatively level ground. The front end of the charging station must be a maximum of 3 cm higher than the back end. The front end of the charging station must never be lower than the back end.



3012-932

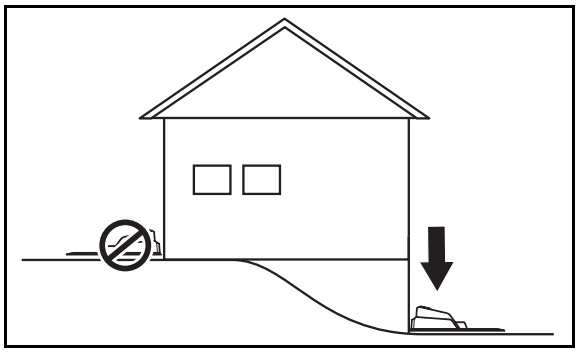
The charging station must not be positioned in a way that can bend its base plate.



3012-933

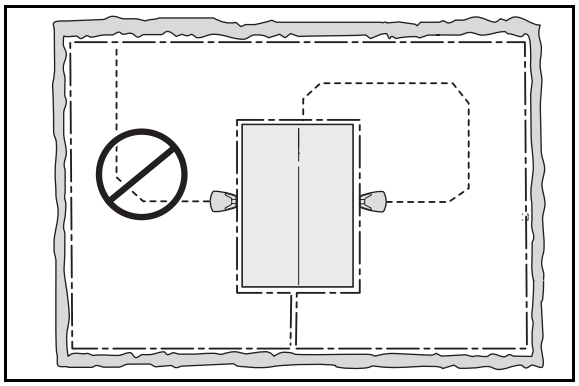
3. INSTALLATION

If the installation is done in a working area with a steep slope (such as around a house on a hill), the charging station should be placed in the area at the bottom of the slope. This makes it easier for the robotic lawnmower to follow the guide wire to the charging station.



3018-059

The charging station should not be placed on an island as this limits the laying of the guide wire in an optimal way. If the charging station has to be installed on an island, the guide wire also has to be connected to the island. See the illustration. Read more about islands in the *3.4 Installation of the boundary wire* chapter.



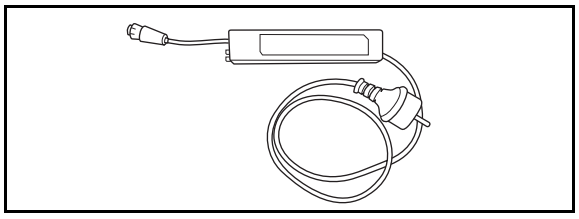
3018-068

Connecting the transformer

Take the following into consideration when planning where to place the transformer:

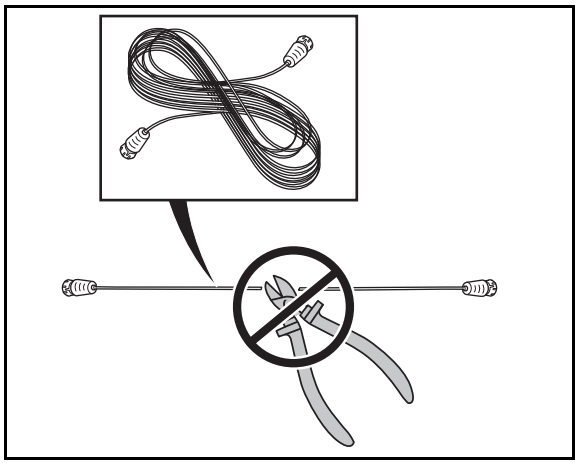
- Close to the charging station
- Protection from rain
- Protection from direct sunlight

If the transformer is connected to an electrical socket outdoors, this must be approved for outdoor use.



3018-063

The low voltage cable for the transformer is 10 metres long, and may not be shortened or extended.



3018-069

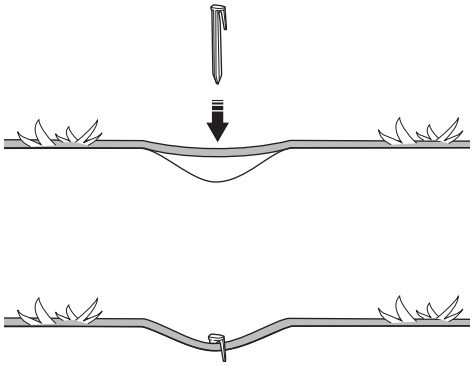
3. INSTALLATION

It is possible to let the low voltage cable cross the working area. The low voltage cable must be stapled down or buried, and the cutting height should be such that the blades on the blade disc can never come in contact with the low voltage cable.

Make sure the low voltage cable is laid along the ground and secured with pegs 75 cm apart. The cable must lie close to the ground so as not to be cut before the grass roots have grown over it.

The transformer must be placed where it is well ventilated and is not exposed to direct sunlight. The transformer must be placed under a roof.

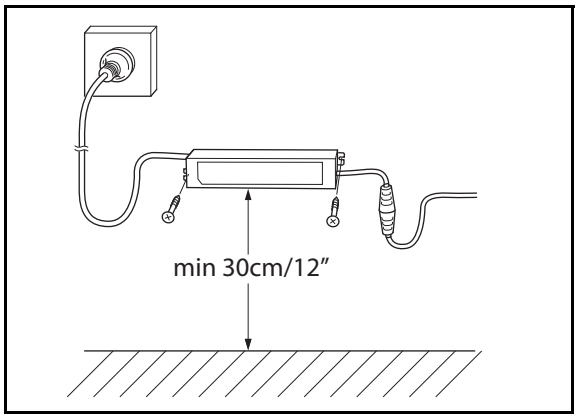
It is recommended to use an earth fault-breaker when connecting the transformer to the wall socket.



3018-085

The transformer must be mounted on a vertical surface, such as a wall or a fence. Screw the transformer in place using the two mounting eyelets. No screws are supplied. Select screws suitable for the material in question.

Do not, under any circumstances, mount the transformer at a height where there is a risk it can be submerged in water (at least 30 cm from the ground). It is not permitted to place the transformer on the ground.



3018-094

IMPORTANT INFORMATION

The low voltage cable must not under any circumstances be shortened or extended.

IMPORTANT INFORMATION

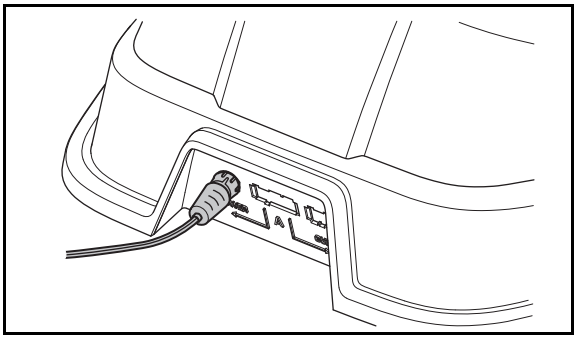
Place the low voltage cable so that the blades on the blade disc can never come in contact with it.

IMPORTANT INFORMATION

Use the plug to disconnect the charging station, for instance before cleaning or repairing the loop wire.

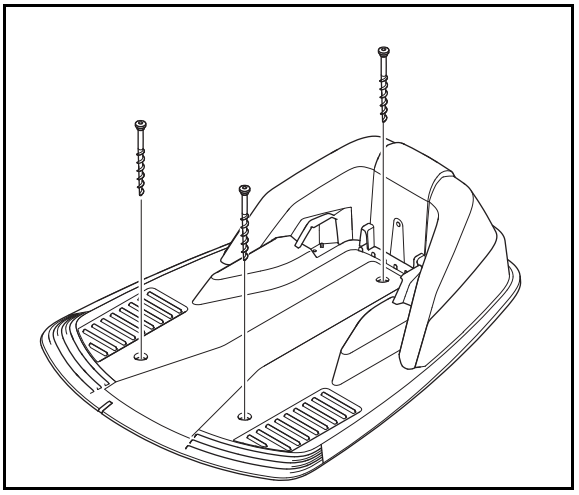
Installation and connecting the charging station

1. Position the charging station in a suitable spot.
2. Connect the low voltage cable to the charging station.
3. Connect the transformer's power cable to a 230 V wall socket. If the wall socket is outdoors, it is important that the transformer is protected from direct sunlight.



3012-984

4. Attach the charging station to the ground using the supplied screws. Ensure the screws are screwed all the way down in the countersink.



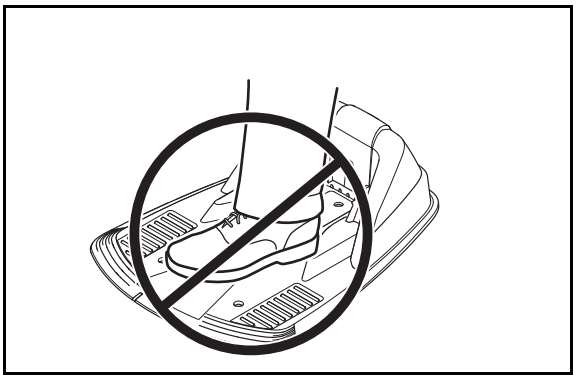
3012-937

IMPORTANT INFORMATION

It is not permitted to make new holes in the base plate Only the existing holes may be used to secure the base plate to the ground.

IMPORTANT INFORMATION

Do not tread or walk on the charging station's base plate.



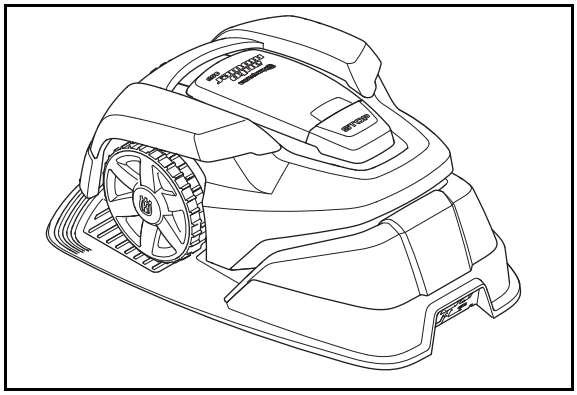
3012-938

3.3 Charging the battery

As soon as the charging station is connected, it is possible to charge the robotic lawnmower. Set the main switch to position *1*.

Place the robotic lawnmower in the charging station to charge the battery while the boundary and guide wires are being laid.

If the battery is flat, it takes around 80 to 100 minutes to fully charge it.



3012-939

IMPORTANT INFORMATION

The Automower® cannot be used before the installation is complete.

3. INSTALLATION

3.4 Installation of the boundary wire

The boundary wire can be installed in one of the following ways:

1. Securing the wire to the ground with staples.

   It is preferable to staple down the boundary wire if you want to make adjustments to the boundary loop during the first few weeks of operation. After a few weeks the grass will have grown over the wire making it no longer visible. Use a hammer/plastic mallet and the staples supplied when carrying out the installation.

2. Bury the wire.

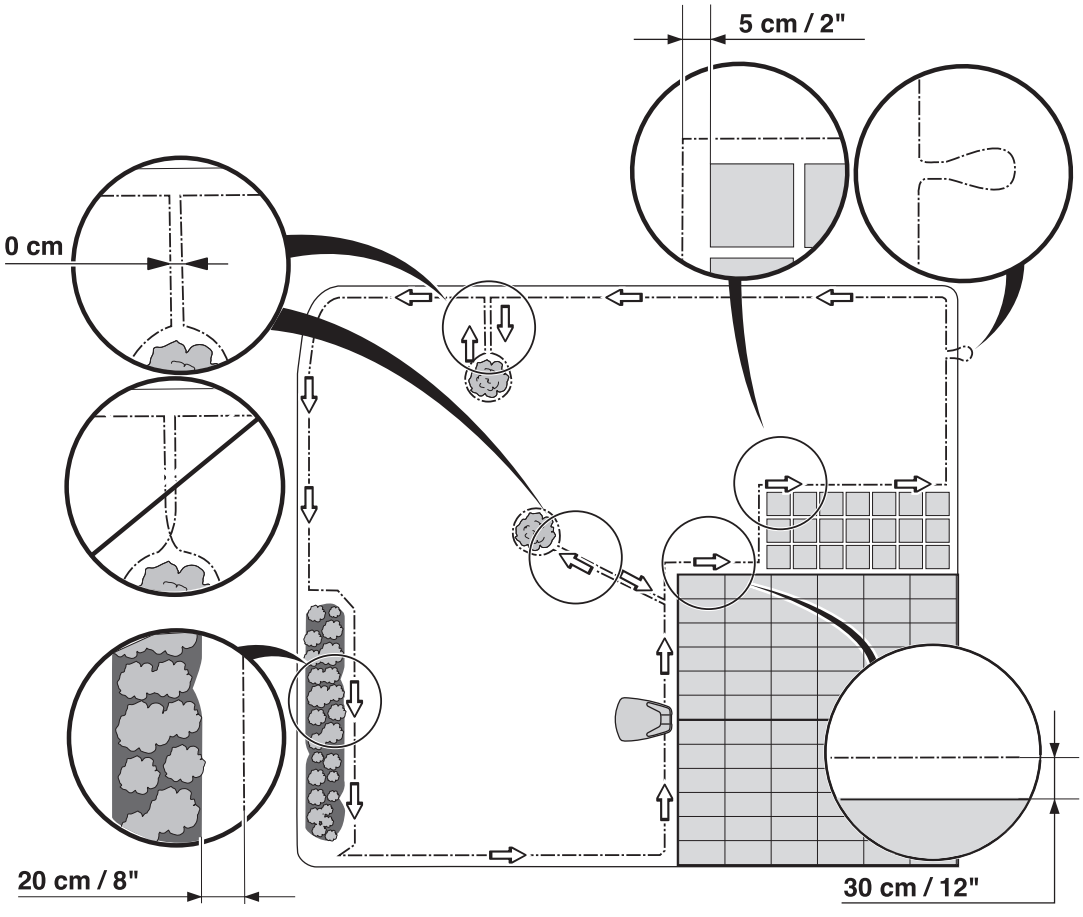
   It is preferable to bury the boundary wire if you want to dethatch or aerate the lawn. If necessary, both methods can be combined so one part of the boundary wire is stapled down and the remainder is buried. The wire can be buried for instance using an edge cutter or a straight spade. Make sure to lay the boundary wire at least 1 cm and a maximum of 20 cm in the ground.

Plan where to lay the boundary wire

The boundary wire must be laid so that:

- A loop is formed around the working area for the robotic lawnmower. Only original boundary wire must be used. It is specially designed to resist dampness from the soil that could otherwise easily damage the wires.
- The robotic lawnmower is never more than 15 metres from the wire at any point in the entire working area.
- The total length of the boundary wire does not exceed 250 metres.
- 20 cm of extra wire is available to which the guide wire will be connected later. See *3.6 Installation of the guide wire* on page 29.

Depending on what the working area is adjacent to, the boundary wire must be laid at different distances from obstacles. The illustration below shows how the boundary wire must be laid around the working area and around obstacles. Use the supplied measurement gauge to obtain the correct distance (see *2.1 What is what?* on page12).

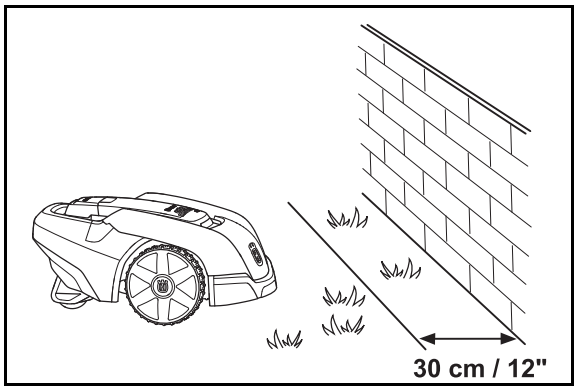


3. INSTALLATION

Working area boundaries

If a high obstacle, for example a wall or fence, borders the working area, the boundary wire should be laid 30 cm from the obstacle. This will prevent the robotic lawnmower from colliding with the obstacle and reduce body wear.

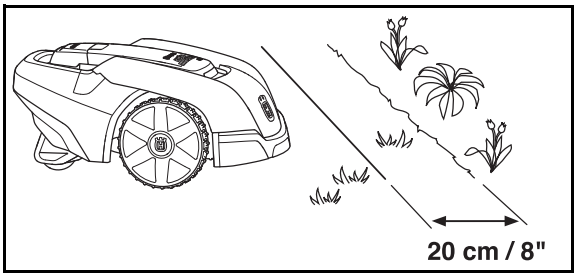
About 20 cm around the fixed obstacle will not be mown.



3012-940

If the working area borders on a small ditch, for example a flower bed or a small elevation, or a low curbstone (3-5 cm), the boundary wire should be laid 20 cm inside the working area. This prevents the wheels from driving into the ditch or up onto the curbstone.

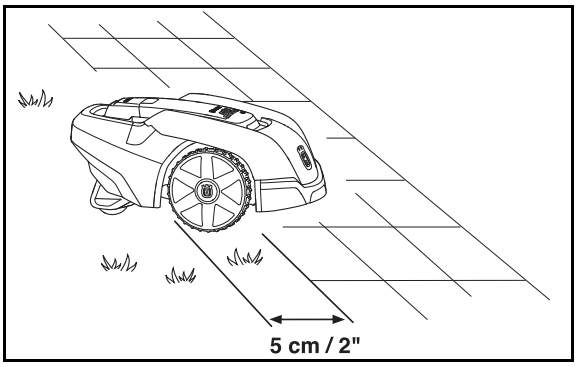
About 12 cm of grass along the ditch/curbstone will not be mown.



3012-941

If the working area borders on a paving stone path or similar which is level with the lawn, it is possible to allow the robotic lawnmower to run a little over the path. The boundary wire should then be laid 5 cm from the edge of the path.

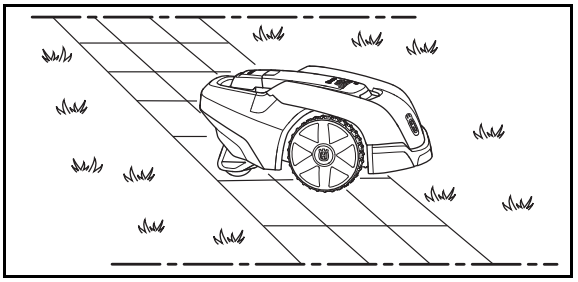
All the grass along the side of the paving stone path will be cut.



3012-942

When the working area is divided by a paving stone path which is level with the lawn, it is possible to allow the robotic lawnmower to run over the path. It can be an advantage to lay the boundary wire under the paving stones. The boundary wire can also be laid in the joint between the paving stones.

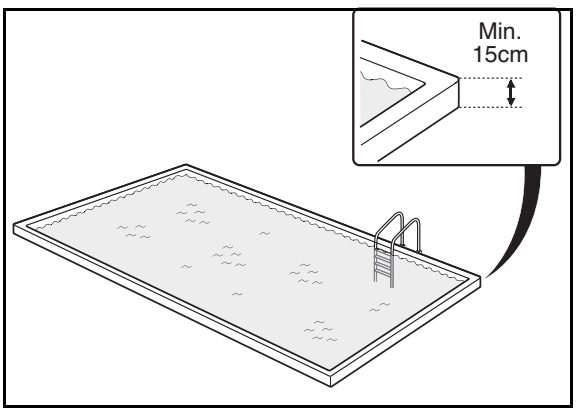
Note: The robotic lawnmower must never run over gravel, mulch or similar material which can damage the blades.



3012-943

IMPORTANT INFORMATION

If the working area is adjacent to water bodies, slopes, precipices or a public road, the boundary wire must be supplemented with an edging or the like. It must then be at least 15 cm in height. This will prevent the robotic lawnmower from ending up outside the working area under any circumstances.

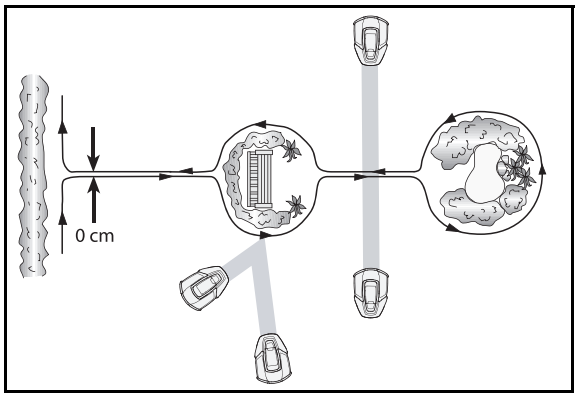


3018-046

3. INSTALLATION

Boundaries within the working area

Use the boundary wire to demarcate areas inside the working area by creating islands around obstacles which cannot withstand a collision, for example, flowerbeds, bushes and fountains. Lay the wire up to and around the area to be demarcated, and then return it back along the same route. If staples are used, the wire should be laid under the same staple on the return route. When the boundary wires to and from the island are laid close together, the robotic lawnmower can drive over the wire.



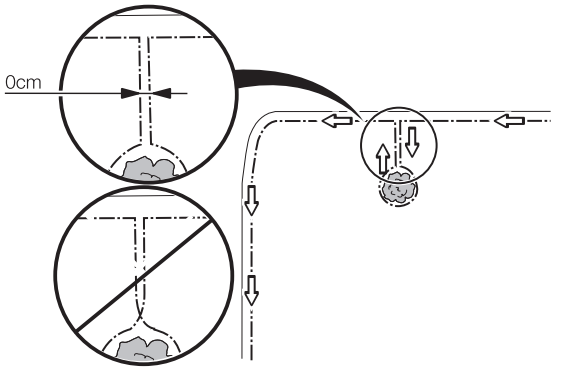
3012-944

Obstacles that can withstand a collision, for example, trees and bushes higher than 15 cm, do not need to be demarcated by the boundary wire. The robotic lawnmower will turn around when it collides with this type of obstacle.

To achieve careful and silent operation, it is recommended to isolate all fixed objects in and around the working area.

The boundary wire may not be crossed on its way to and from an island.

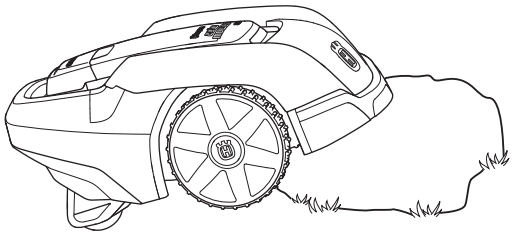
Obstacles that slope slightly, for example, stones or large trees with raised roots, must be isolated or removed. Otherwise the robotic lawnmower can slide up onto this kind of obstacle causing the blades to be damaged.



3012-686

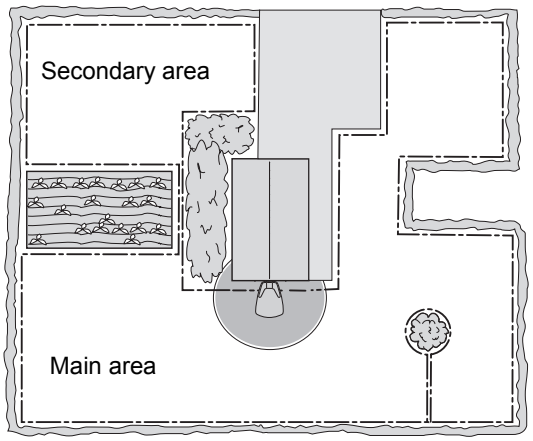
Secondary areas

If the working area consists of two areas which the robotic lawnmower has difficulty travelling between, it is recommended to set up a secondary area. Instances of this are 25% slopes or a passage that is narrower than 60 cm. Lay the boundary wire then around the secondary area so that it forms an island outside of the main area.



3012-945

The robotic lawnmower must be moved manually between the main and secondary area when the lawn in the secondary area has to be cut. The *MAN* operation mode must be used as the robotic lawnmower cannot travel on its own from the secondary area to the charging station. See *5.1 Operation selection* on page 40. In this mode, the robotic lawnmower will never look for the charging station but will mow until the battery runs out. When the battery is flat, the robotic lawnmower will stop and the *Needs manual charging* message will appear in the display. Then place the robotic lawnmower in the charging station to charge the battery. If the main working area has to be cut after charging, it is appropriate to switch the operation mode to Auto before placing the robotic lawnmower in the charging station.



3012-971

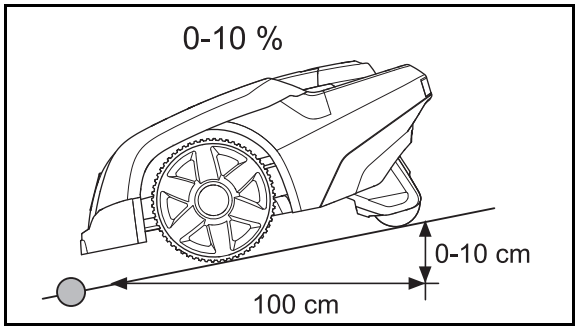
Passages when mowing

Long and narrow passages and areas narrower than 1.5 - 2 metres should be avoided. When the robotic lawnmower mows, there is a risk that it travels around in the passage or area for a period of time. The lawn will then look flattened.

3. INSTALLATION

Slopes

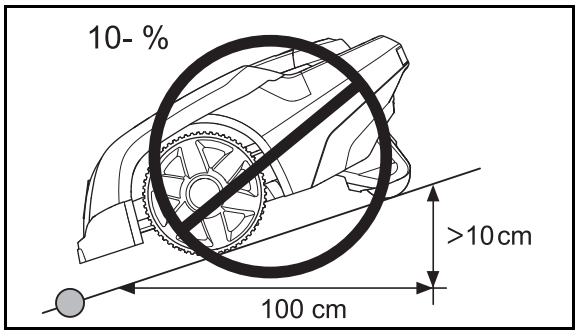
The boundary wire can be laid across a slope that slants less than 10%.



3012-946

The boundary wire should not be laid across a slope that is steeper than 10%. There is a risk that the robotic lawnmower will find it difficult to turn there. The robotic lawnmower will then stop and the *Outside working area* fault message is displayed. The risk is at its greatest in damp weather conditions, as the wheels can slip on the wet grass

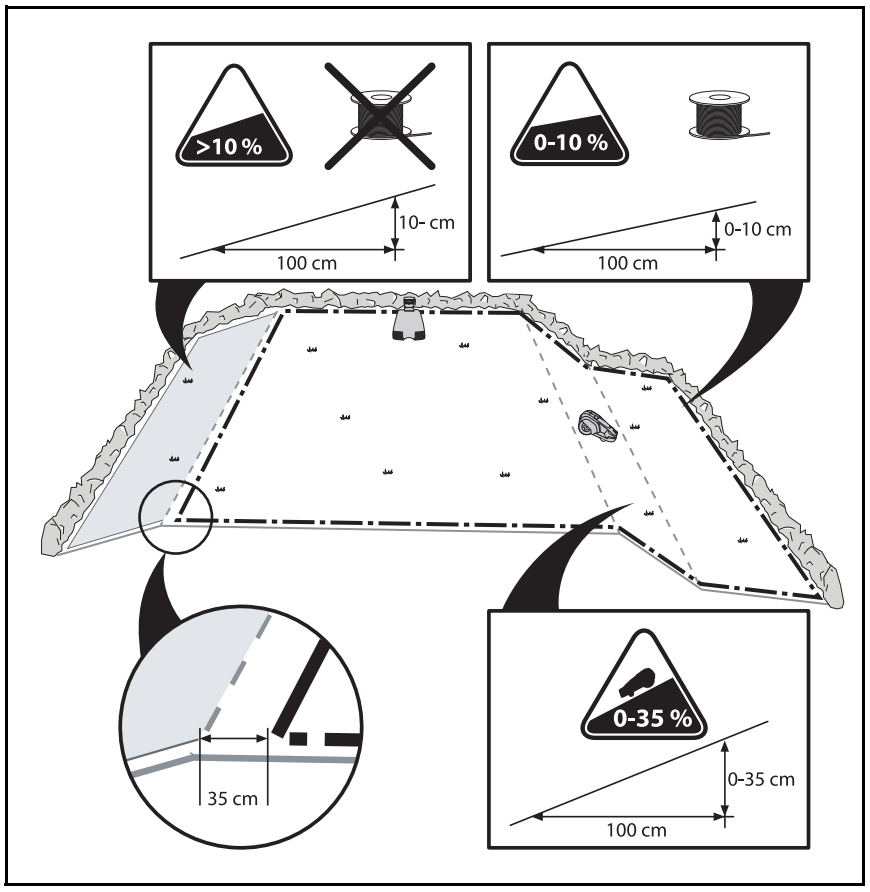
However, the boundary wire can be laid across a slope steeper than 10% if there is an obstacle that the robotic lawnmower is allowed to collide with, for example, a fence or a dense hedge.



3012-947

The robotic lawnmower can mow lawns that slope up to 25 cm every metre (25%) inside the working area. Areas that slope more must be demarcated by the boundary wire.

When a part of the working area's outer edge slopes more than 10 cm per distance metre (10%), the boundary wire should be laid 20 cm in on the flat ground before the beginning of the slope.



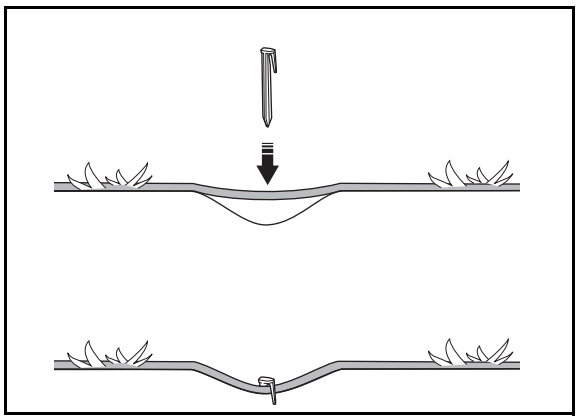
3012-674

3. INSTALLATION

Laying the boundary wire

If you intend to staple down the boundary wire:

- Cut the grass very low with a standard lawnmower or a trimmer where the wire is to be laid. It will then be easier to lay the wire close to the ground and the risk of the robotic lawnmower cutting the wire or damaging the insulation of the wire is reduced.
- Make sure to lay the boundary wire close to the ground and secure the staples close together approximately 75 cm apart. The cable must lie close to the ground so as not to be cut before the grass roots have grown over it.
- Use a hammer to knock the staples into the ground. Exercise care when knocking in the staples and make sure the wire is not under strain. Avoid sharp bends in the wire.

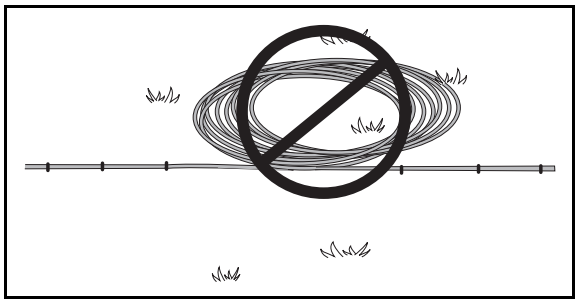


3018-085

If the boundary wire is to be buried:

- Make sure to lay the boundary wire at least 1 cm and a maximum of 20 cm in the ground. The wire can be buried for instance using an edge cutter or a straight spade.

Use the supplied measurement gauge as a guide when you lay out the boundary wire. This helps you to easily set the correct distance between the boundary wire and the boundary/obstacle. The measurement gauge is broken loose from the box.



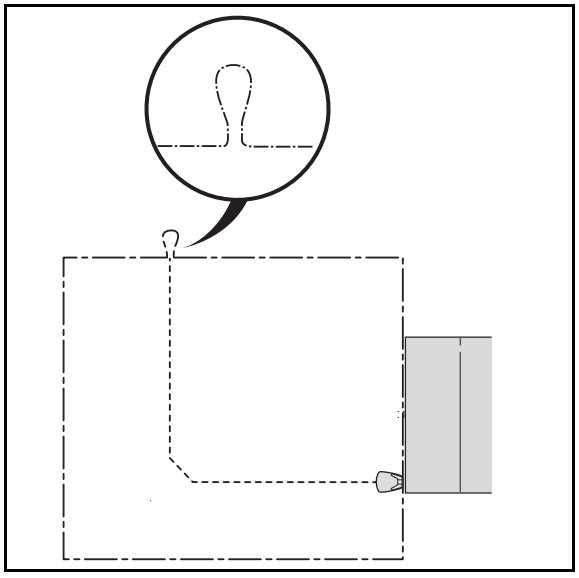
3012-281

IMPORTANT INFORMATION

Extra wire must not be placed in coils outside the boundary wire. This can disrupt the robotic lawnmower.

Loop for connecting the guide wire

To facilitate the connection of the guide wire to the boundary wire, it is recommended to create a loop with about 20 cm of extra boundary wire at the point where the guide wire will later be connected. It is a good idea to plan where the guide wire will be placed before laying out the boundary wire. See *3.6 Installation of the guide wire* on page 29.

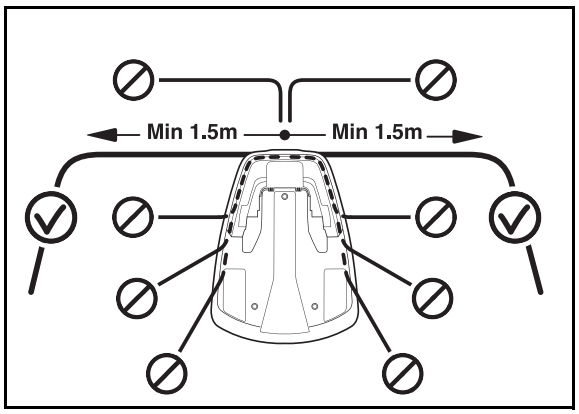


3018-086

3. INSTALLATION

Laying the boundary wire in towards the charging station

The boundary wire must be laid in line with the rear end of the charging station and at least 1.5 metres straight out to the right and left of the station. See the illustration. If the boundary wire is laid in any other way, the robotic lawnmower may find it hard to find the charging station.

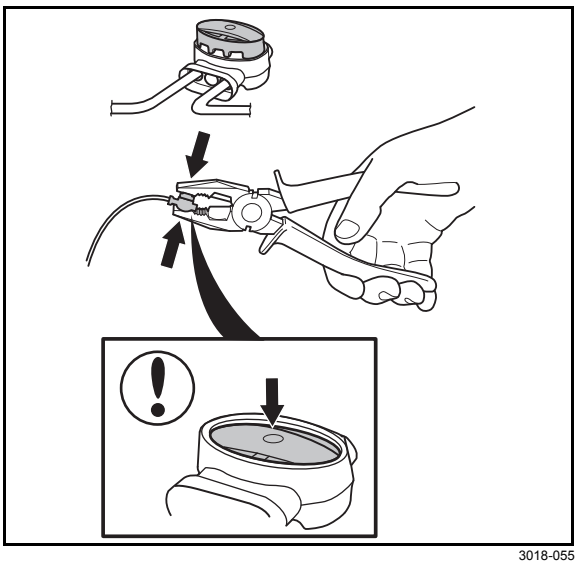


3018-072

Splicing the boundary wire

Use an original coupler if the boundary wire is not long enough and needs to be spliced. It is waterproof and gives a reliable electrical connection.

Insert both wire ends in the coupler. Check that the wires are fully inserted into the coupler so that the ends are visible through the transparent area on the other side of the coupler. Now press down the button on top of the coupler fully. Use a pair of pliers if the button on the coupler is difficult to press down by hand.



3018-055

IMPORTANT INFORMATION

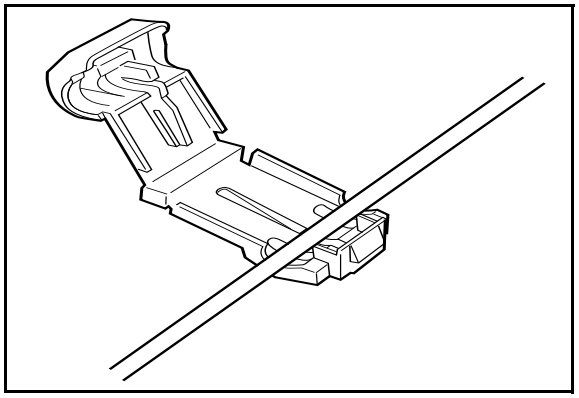
Twinned cables, or a screw terminal block that is insulated with insulation tape are not satisfactory splices. Soil moisture will cause the leads to oxidise and after a while result in a broken circuit.

3.5 Connecting the boundary wire

Connect the boundary wire to the charging station:

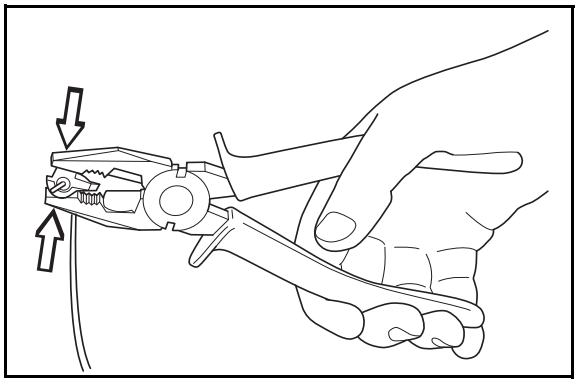
IMPORTANT INFORMATION

The boundary wire must not be crossed when connecting it to the charging station. The right hand wire end must be connected to the right hand pin on the charging station and the left hand wire end to the left pin.



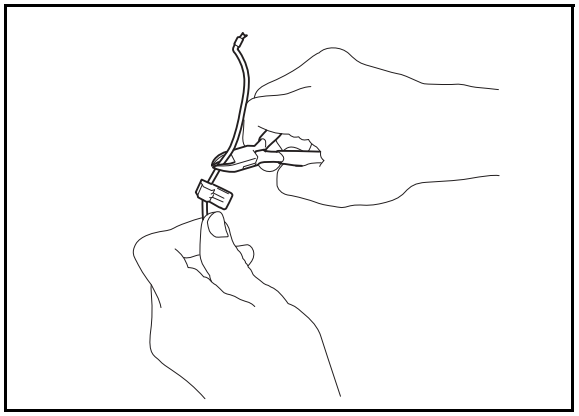
3012-284

1. Place the wire ends in the connector:
   - Open the connector.
   - Place the wire in the connector grip.
2. Press the connectors together using a pair of pliers. Press until you hear a click.



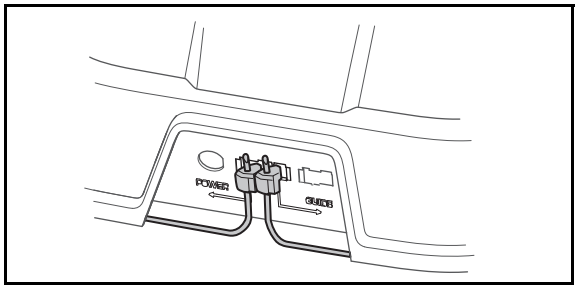
3012-264

3. Cut off any excess boundary wire 1 or 2 centimetres above each connector.



3012-265

4. Press the connector onto the metal pins, marked with an A, on the charging station.



3012-996

IMPORTANT INFORMATION

The right hand connector must be connected to the right hand metal pin on the charging station and the left hand wire end to the left connector.

3.6 Installation of the guide wire

The guide wire is a wire that is laid from the charging station towards, for instance, a remote part of the working area or through a narrow passage to be then connected with the boundary loop. The same cable roll is used for both the boundary loop and guide wire.

The guide wire is used by the robotic lawnmower to find its way back to the charging station but also to guide the robotic lawnmower to hard-to reach areas of the garden.

To ensure an even cut over the entire lawn, the robotic lawnmower can follow the guide wire from the charging station to the guide wire connection in the boundary loop and start mowing there. Depending on the garden layout, one should adjust how often the robotic lawnmower is to follow the guide wire from the charging station. See *6.4 Installation* on page 45.

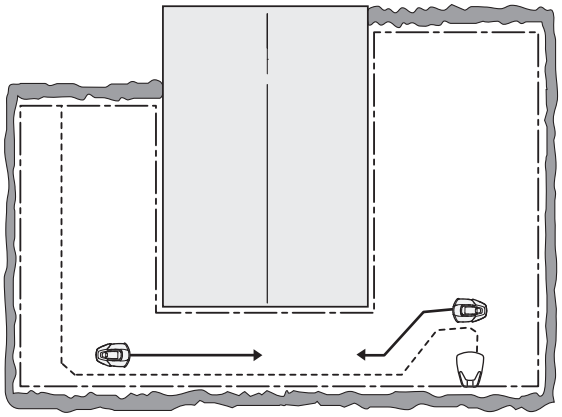
The robotic lawnmower runs at varying distances from the guide wire to reduce the risk of tracks forming when the robotic lawnmower follows the guide wire to and from the charging station. The area beside the wire which the robotic lawnmower then uses is called the Corridor.

The robotic lawnmower always runs to the left of the guide wire as seen facing the charging station. Thus the corridor is to the left of the guide wire. When installing, it is therefore important to create as much free space as possible to the left of the guide wire, as seen facing the charging station. It is not allowed to lay the guide wire closer than 30 cm from the boundary wire.

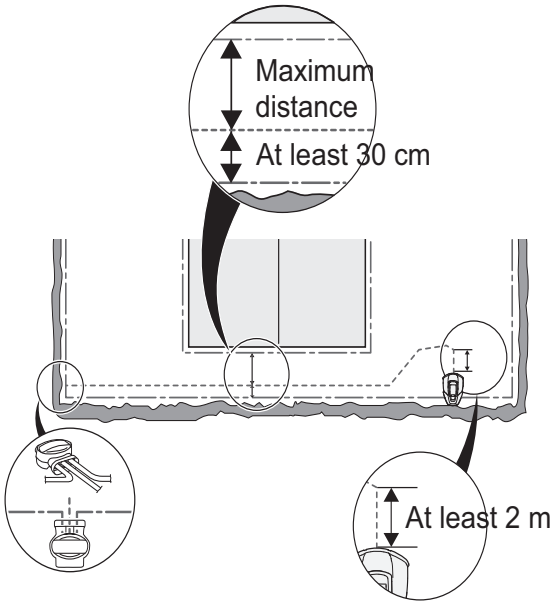
The guide wire, as the boundary wire, can be stapled to or buried in the ground.

IMPORTANT INFORMATION

It is important to create as much free space as possible to the left of the guide wire, as seen facing the charging station.



3012-952

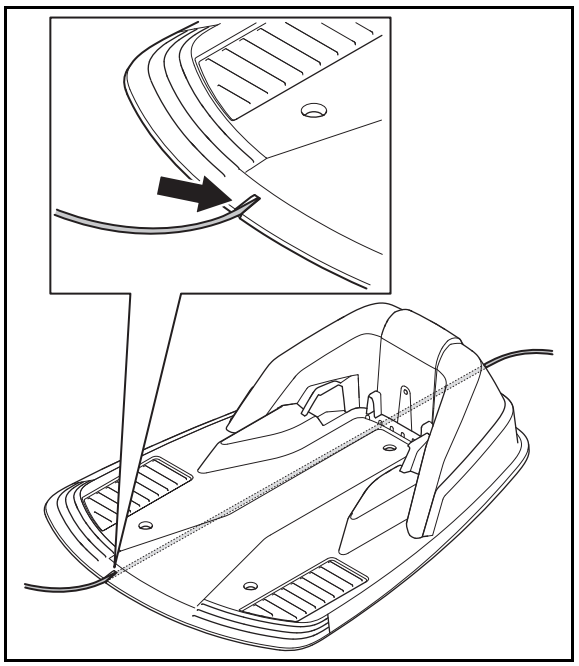


3012-951

3. INSTALLATION

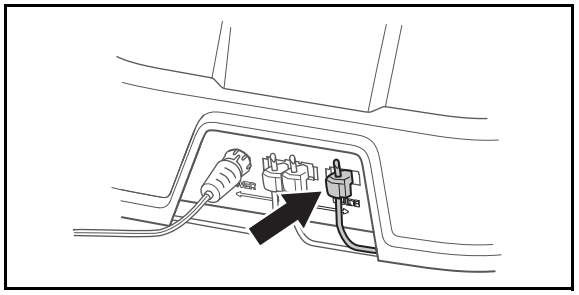
Laying and connecting the guide wire

1. Run the wire through the slot in the bottom of the charger plate.



3012-997

2. Fit the connector to the guide wire in the same way as for the boundary wire described in *3.5 Connecting the boundary wire*. Connect it to the contact pin on the charging station that is labelled 'Guide'.

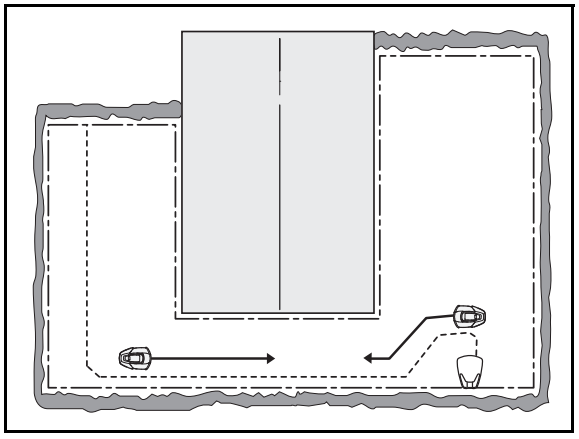


3012-995

3. Run the wire at least 2 metres straight out from the front edge of the plate.

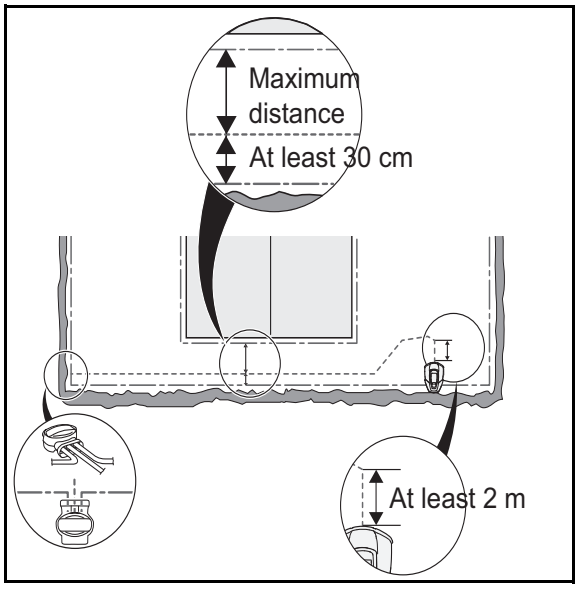
   If the guide wire must be laid in a passage:

   - The robotic lawnmower follows the guide wire on the same side of the wire to and from the charging station. This means that the robotic lawnmower always runs on the left hand side of the guide wire, as seen facing the charging station.



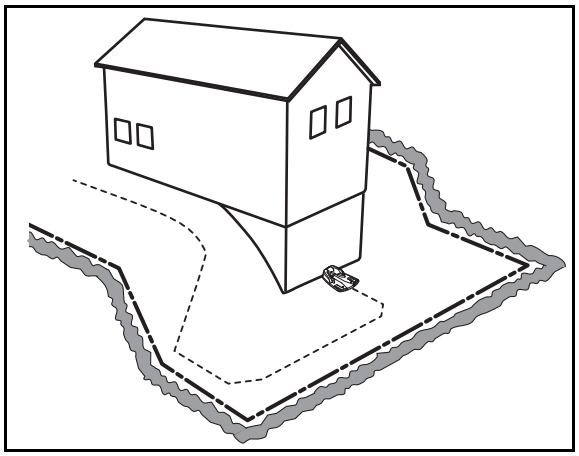
3012-952

- - In the passage, the guide wire must therefore be placed so that the robotic lawnmower has as much space to run in as possible. The distance between the boundary loop and the guide wire must however be at least 30 cm.



3012-951

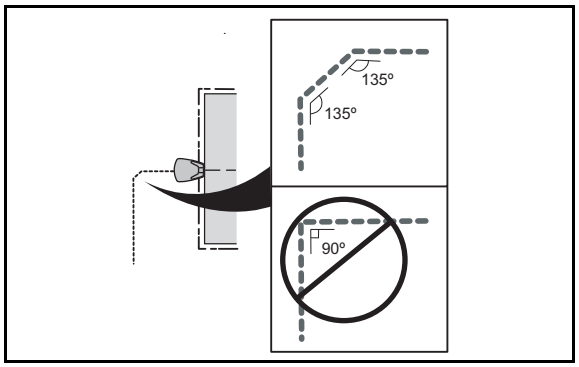
If the guide wire has to be installed on a steep slope, it is an advantage to lay the wire at an angle to the slope. This makes it easier for the robotic lawnmower to follow the guide wire on the slope.



3018-061

Avoid laying the wire at sharp angles. This can make it difficult for the robotic lawnmower to follow the guide wire.

4. Run the guide wire to the point on the boundary loop where you wish to make the connection.
5. Lift up the boundary wire. Cut the boundary wire using for instance a pair of wire cutters.



3012-953

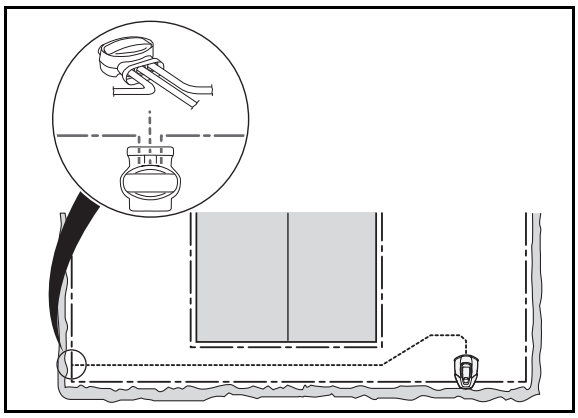
6. Connect the guide wire to the boundary wire using a coupler:

   Insert the boundary wire in each of the holes in the coupler. Insert the guide wire in the centre hole in the coupler. Check that the wires are fully inserted into the coupler so that the ends are visible through the transparent area on the other side of the coupler.

   Use pliers to completely compress the button on the coupler.

   It does not matter which holes are used to connect each wire.

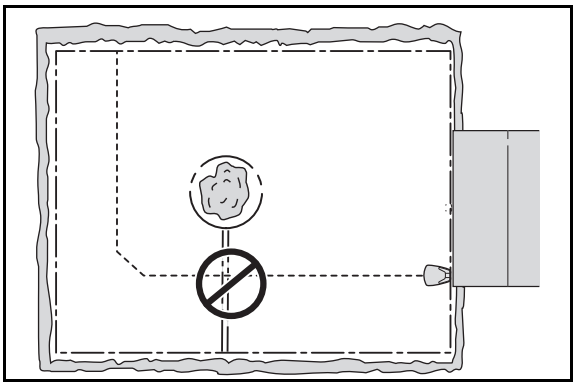
7. Staple down/bury the connector in the lawn.



3012-954

IMPORTANT INFORMATION

The function of the guide wire varies depending on the layout of the working area. This is why it is recommended to test the installation using this function . See *6.4 Installation* **on page 45.**



3018-073

IMPORTANT INFORMATION

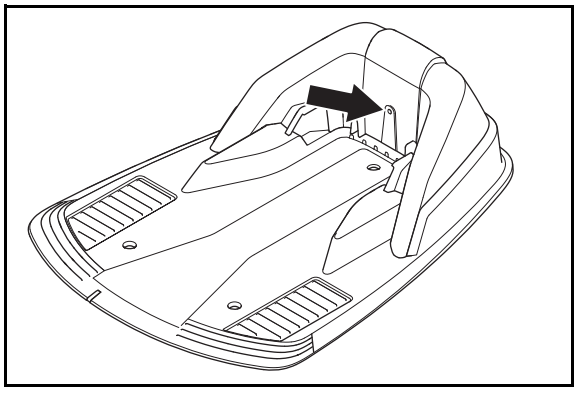
The guide wire may not cross the boundary wire, for instance a boundary wire that is laid out to an island.

3.7 Checking the installation

Check the loop signal by inspecting the indicator lamp on the charging station.

- Solid green light = good signals.
- Flashing blue light = interruption in the boundary loop, no signal.
- Flashing yellow light = interruption in the guide loop, no guide signal.
- Flashing red light = interruption in the charging station's antenna plate. Contact the dealer for assistance, see Memo on page 4.
- Solid blue light = weak signal. This may depend on the boundary loop being too long or that the wire is damaged. If the robotic lawnmower still works, this is not a problem.
- Solid red light = fault in a circuit board in the charging station. The fault should be rectified by an authorized dealer.

See *9.2 Indicator lamp in the charging station* on page 66 if the lamp does not indicate a solid green light.



3012-998

3.8 First start-up and calibration

Before the robotic lawnmower is operated, a start-up sequence in the robotic lawnmower's menu must be carried out as well as an automatic calibration of the guide signal. The calibration is also a good test to see that the installation of the guide wire has been done in such a way that the robotic lawnmower can easily follow the guide wire from the charging station.

1. Set the main switch to position *1*.
2. Open the control panel cover by pressing the **STOP** button.

   A start-up sequence begins when the robotic lawnmower is started for the first time. The following is requested:

   - Language
   - Time format
   - Current time
   - Date format
   - Date
   - Four digit PIN code. All combinations except 0000 are permitted.

IMPORTANT INFORMATION

Use *MEMO* on page 4 to make a note of the PIN code.

3. Place the robotic lawnmower in the charging station as requested in the display. The robotic lawnmower will now start the guide calibration, by leaving the charging station and following the guide wire to the point where the guide wire is connected to the boundary loop to begin mowing there. Check that the robotic lawnmower can follow the guide wire all the way.

   If it cannot, this may be due to an incorrectly installed guide wire. In this case, check that the installation is performed as described in *3.6 Installation of the guide wire* on page 29. Therefore, carry out a new Test OUT, see *6.4 Installation* on page 45.

3.9 Test docking with the charging station

Before using the robotic lawnmower, check that the robotic lawnmower can follow the guide wire all the way to the charging station and easily docks with the charging station. Perform the test below.

1. Open the control panel cover by pressing the **STOP** button.
2. Place the robotic lawnmower close to the point where the guide wire is connected to the boundary wire. Place the robotic lawnmower about 2 metres from the guide wire, facing the guide wire.
3. Select *Home* mode by pressing the house symbol key and pressing *OK* when the cursor is at *Home*. Press **Start** and close the cover.
4. Check that the robotic lawnmower follows the guide wire all the way to the charging station and that it docks with the charging station. The test is approved only if the robotic lawnmower is able to follow the guide wire the entire distance to the charging station and docks at the first attempt. If the robotic lawnmower is unable to dock on the first attempt, it will automatically try again. The installation is not approved if the robotic lawnmower needs two or more attempts to dock with the charging station. In this case, check that the charging station, the boundary wire and the guide wire are installed in accordance with the instructions in Chapters 3.2, 3.4 and 3.6.
5. The robotic lawnmower will stay in the charging station until *Auto* or *Man* mode is selected. See *5.1 Operation selection* on page 40.

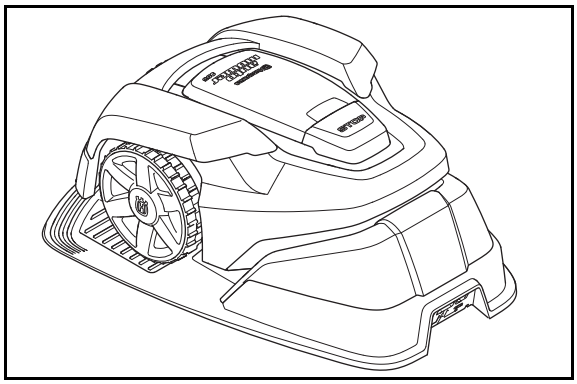
The guide system must first be calibrated if the above test is to provide a satisfactory result. See *3.8 First start-up and calibration* on page 33.

4. Use

4.1 Charging a flat battery

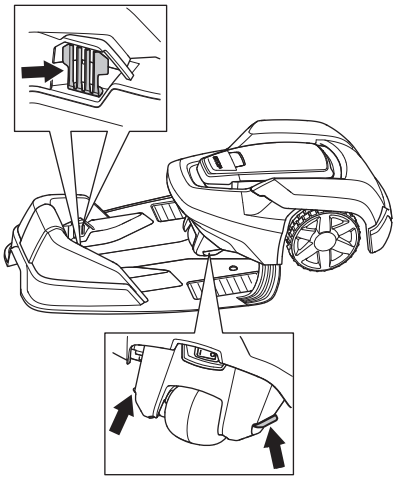
When the robotic lawnmower is new or has been stored for a long period, the battery will be flat and needs to be charged before starting. Charging takes approximately 80 to 100 minutes.

1. Set the main switch to position *1*.



3012-939

2. Park the robotic lawnmower in the charging station. Open the cover and push the robotic lawnmower in as far as possible to ensure proper contact between the robotic lawnmower and the charging station.
3. The display shows a message that charging is in progress.



3012-1001

WARNING

Read the safety instructions before you start your robotic lawnmower.

1001-003

WARNING

Keep your hands and feet away from the rotating blades. Never put your hands or feet close to or under the body when the motor is running.

3012-663

4.2 Using the timer

The lawn should not be cut too often to obtain the best mowing result. Use the timer function (see *6.3 Timer* on page 44.) to avoid a downtrodden lawn. When setting the timer, calculate that the robotic lawnmower mows about 45 m² per hour and day (about 30 m² for Automower® 305).

Example

If the working area is 360 m² the robotic lawnmower must operate for about 8 hours per day (about 12 hours for the Automower® 305). The times are approximate and depend for instance on grass quality, blade sharpness and battery age.

IMPORTANT INFORMATION

Use the timer to avoid mowing when there are usually children, pets and anything else that could be damaged by the rotating blades on the lawn.

The factory setting for the timer is 05:00-24:00 (07:00-23:00 for the Automower® 305) and it allows mowing every day of the week. This setting is suitable for a working area of about 800 m² (500 m² for the Automower® 305).

If the size of the working area allows it, the quality of the grass can be further improved if it is cut every other day instead of a few hours every day. In addition, the grass benefits from resting completely during at least a three-day period once a month.

Standby

The robotic lawnmower has an inbuilt standby period of about 6 hours a day (8 hours for the Automower® 305). The standby period provides a good opportunity, for example, to water or play games on the lawn.

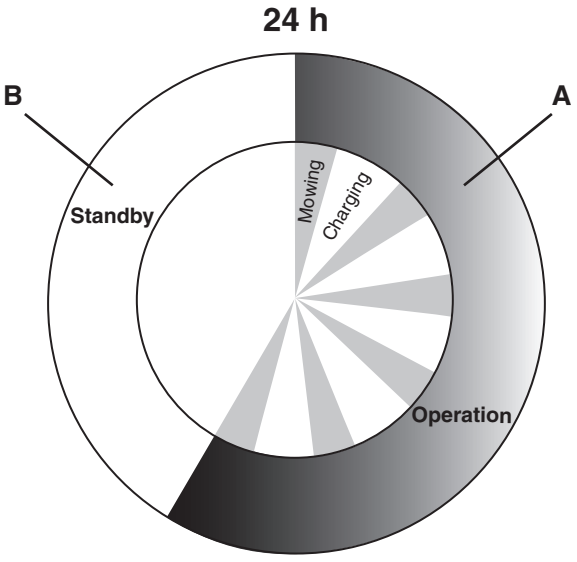
Example 1

The times used in this example are applicable to the Automower®305 but the principle is the same for the Automower® 308.

Work period 1: 07:00 - 23:00

Work days: All days

The factory setting ensures that the robotic lawnmower begins cutting the lawn at 07.00. The mower is parked in the charging station from 22.00 and rests until it starts cutting again at 07.00



305

Operation	**A = Max 16 h**
Charging/Standby	**B = Min 8 h**

308

Operation	**A = Max 18 h**
Charging/Standby	**B = Min 6 h**

3012-1081

If the timer setting is divided into two work periods, the standby period can be divided into a number of periods. The total standby time must however be at least 6 hours (8 hours for Automower® 305).

Example 2

The times used in this example are applicable to the Automower® 305 but the principle is the same for the Automower® 308.

Work period 1: 08:00 - 16:00

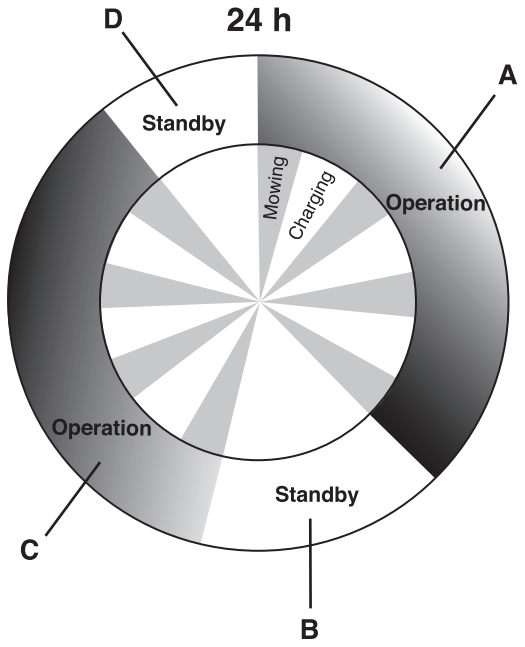
Work period 2: 20:00 - 23:00

Work days: All days

The robotic lawnmower will operate for the times specified in the work periods as the total operating time is 11 hours and does not exceed the maximum of 16 hours.

	Automower® 305	Automower® 308
Max. operating time	16 h	18 h
Min. standby time	8 h	6 h
Area/hour/day	30 m^2	45 m^2

The times are approximate and depend for instance on grass quality, blade sharpness and battery age.



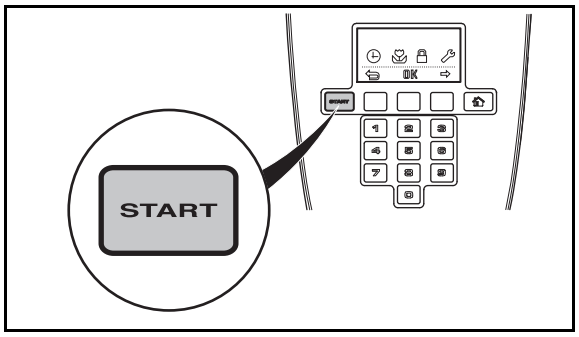
305

Operation	**A + C = Max 16 h**
Charging/Standby	**B + D = Min 8 h**

308

Operation	**A + C = Max 18 h**
Charging/Standby	**B + D = Min 6 h**

3012-1082



3012-990

4.3 Starting

1. Set the main switch to position *1*.
2. Press the **STOP** button to open the control panel cover.
3. Enter the PIN code.
   The PIN code request can be disabled. For more information about anti-theft protection, see *6.5 Security*.
4. Push the Start button.
5. Shut the cover within 10 seconds.

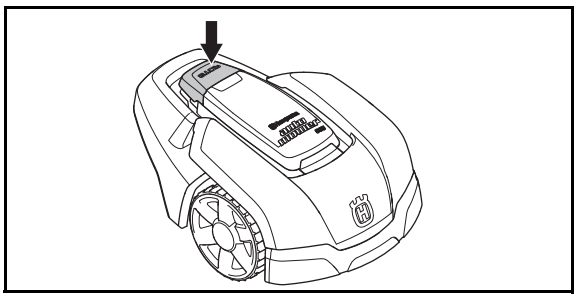
If the robotic lawnmower is parked in the charging station, it will only leave the charging station when the battery is fully charged and if the timer is set to allow the mower to operate.

Before the blade disc starts, 5 beeps are heard for 2 seconds.

4.4 Stopping

1. Press the **STOP** button.

   The robotic lawnmower stops, the blade motor stops and the control panel cover opens.



3012-929

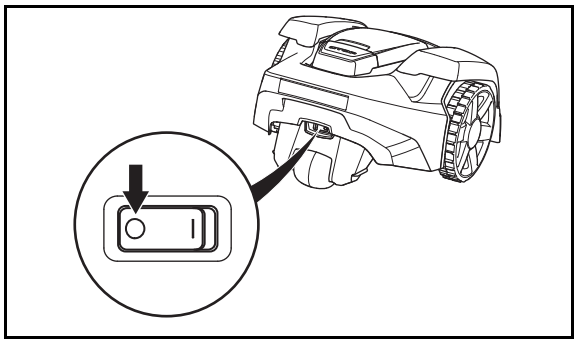
Restart

1. Push the Start button.
2. Shut the cover within 10 seconds. The robotic lawnmower starts automatically.

4.5 Switching off

1. Press the **STOP** button.
2. Set the main switch in position *0*.

Always switch the robotic lawnmower off using the main switch if it requires maintenance or if the robotic lawnmower must be moved outside the working area.



3012-1023

4.6 Adjusting the cutting height

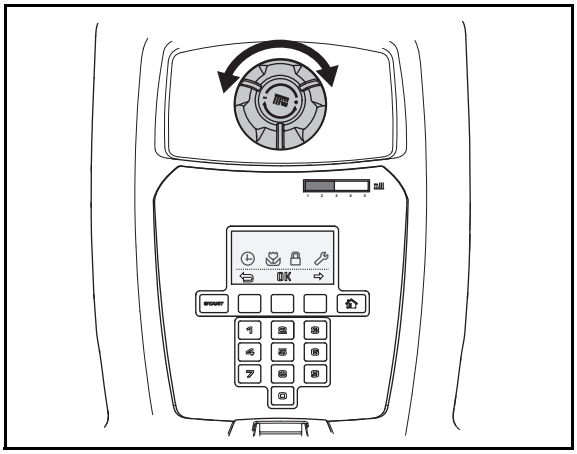
The cutting height can be varied from MIN (2 cm) to MAX (5 cm).

During the first week after a new installation, the cutting height must be set to MAX to avoid damaging the loop wire. After this, the cutting height can be lowered one step every week until the desired cutting height has been reached.

If the grass is long, allow the robotic lawnmower to start mowing at the MAX cutting height. Once the grass is shorter, you can gradually lower the cutting height.

To adjust the cutting height:

1. Press the **STOP** button to stop the robotic lawnmower and open the cover.
2. Turn the height adjustment knob to the required position. The selected position is indicated by the orange column that can be seen by the knob through the window.
   - Turn anti-clockwise to raise the cutting height.
   - Turn clockwise to lower the cutting height.



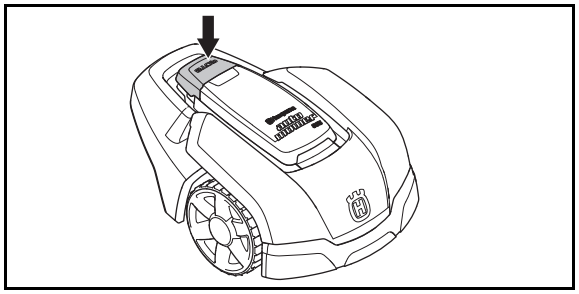
3012-1005

IMPORTANT INFORMATION

During the first week after a new installation, the cutting height must be set to MAX to avoid damaging the loop wire. After this, the cutting height can be lowered one step every week until the desired cutting height has been reached.

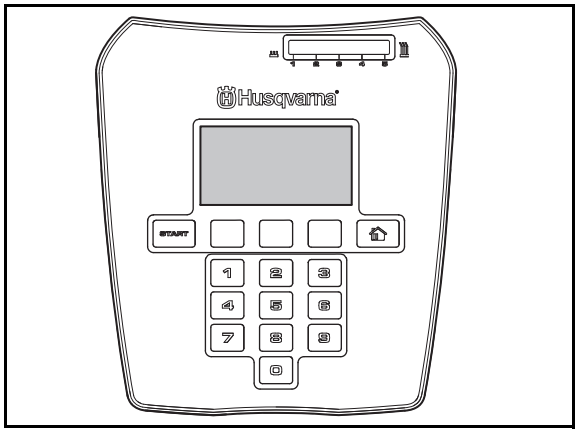
5. Control panel

All forms of commands and settings for the Husqvarna robotic lawnmower are made via the control panel. All functions are accessed via a number of menus.



3012-929

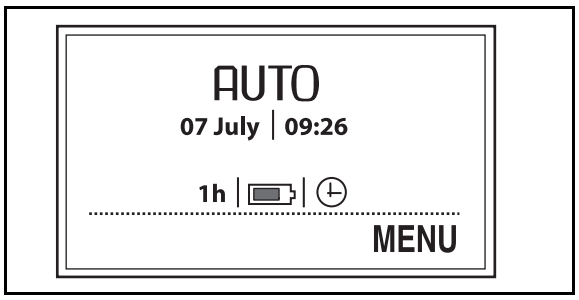
The control panel consists of a display and a keypad. All information is shown on the display and all input is done using the buttons.



3012-983

When the stop button has been pressed and the cover is opened, the operation window appears showing the time, selected operating mode, number of mowing hours, battery status and timer setting.

- The clock shows the current time.
- Date shows the current day.
- The number of operating hours indicates the number of hours since the day of manufacture that the robotic lawnmower has been in operation. The time that the robotic lawnmower has spent mowing or looking for the charging station is counted as operating time.
- *AUTO*, *MAN* or *HOME* show which mode of operation is selected.

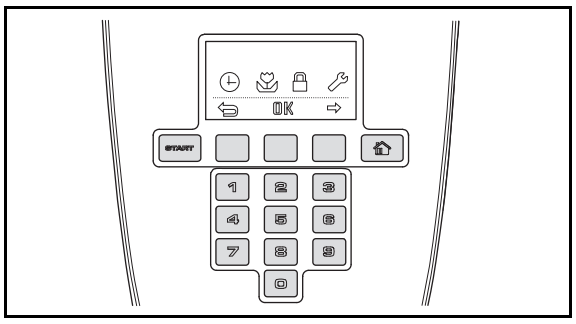


3018-079

The battery status shows the remaining battery charge.

- The clock symbol indicates when the timer settings are set. The clock symbol is black when the robotic lawnmower is not allowed to mow due to a timer setting and it is white when the mower is allowed to mow.
- The *MENU* text illustrates that the main menu can be reached by pressing the multi-choice button that is located under the text.

The keypad consists of four groups of buttons: operation selection button, multi-choice buttons, numbers and start button.



3012-988

5. CONTROL PANEL

5.1 Operation selection

The operation selection button is symbolised by a house. When the button has been pressed, the selected operation mode is shown in the display. By consecutively pressing the button many times, one can choose between three different operation modes.

1. **HOME:**
   Sends the robotic lawnmower to the charging station. It remains here until another operation mode is selected. The text *Home* is shown in the operation window. When the battery is fully charged, the robotic lawnmower will remain parked in the charging station. The robotic lawnmower will first leave the charging station and begin mowing again when the operation selection is altered to AUTO.

   The Home setting is also used after a new installation or when changes are made to an existing installation to test if the robotic lawnmower can follow the guide wire and dock with the charging station. See *3.9 Test docking with the charging station* on page 34.

2. **AUTO:**
   The standard, automatic operation mode where the robotic lawnmower mows and charges automatically.

3. **MAN:**
   When mowing secondary areas (see *3.4 Installation of the boundary wire* on page 22) the *MAN* setting must be used.

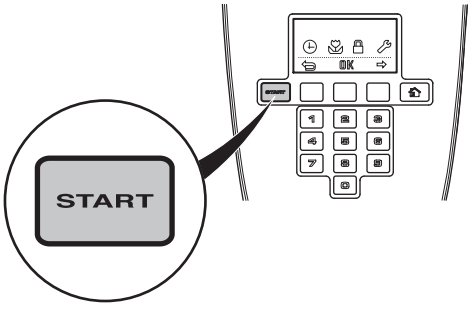
   If *MAN* is selected and the robotic lawnmower starts when it is out on the lawn, it will mow until the battery runs out. It will then stop and the '*Needs manual charging*' message will appear. The robotic lawnmower must then be moved manually to the charging station and then started manually after charging.

   If the robotic lawnmower charges in the *MAN* mode, it will fully charge, move about 20 cm out of the charging station and then stop. This indicates that it is charged and ready to start mowing.

   If the main working area has to be cut after charging, it is appropriate to switch the operation mode to Auto before placing the robotic lawnmower in the charging station.

IMPORTANT INFORMATION

Always press the START button before closing the cover to start the robotic lawnmower. If the START button is not pressed, a message beep is heard and the robotic lawnmower will not start.



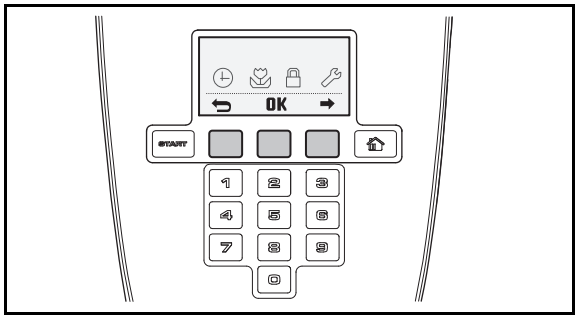
3012-990

5. CONTROL PANEL

5.2 Multi-choice buttons

The three multi-choice buttons offer various functions, among others depending on where in the menu structure you are. The button function is shown at the very bottom of the display.

Example: If you are in the main menu, the left button can be used to go back, the middle button confirms any selections and the right button helps you to scroll the menu.

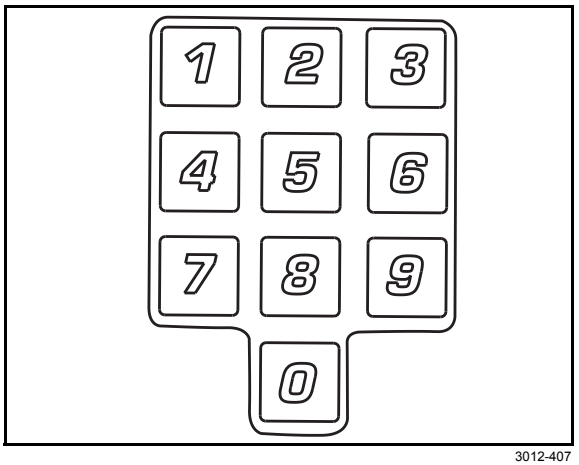


3012-985

5.3 Numbers

The number keys are used for instance to enter the PIN code or time settings.

The number keys can also be used to enter a number series for shortcuts to the various menus. For more information on number series, see *6.1 Main menu* on page 42.



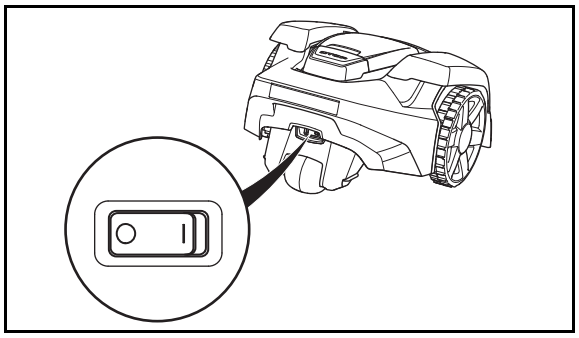
3012-407

5.4 Main switch

Set the main switch in the *1* position to start the robotic lawnmower.

Set the main switch in the *0* position when the robotic lawnmower is not in use or work is being carried out on the blade disc.

When the main switch is set in the *0* position the motors on the robotic lawnmower cannot start.



3012-1027

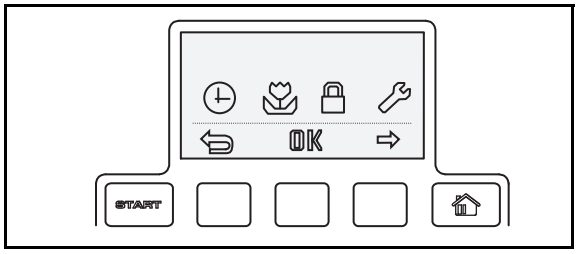
6. Menu functions

6.1 Main menu

The main menu consists of four options:

- *Timer*
- *Installation*
- *Security*
- *Settings*

There are a number of submenus under each option. You can access all the functions to set the robotic lawnmower settings via these.



3012-987

Browse between menus

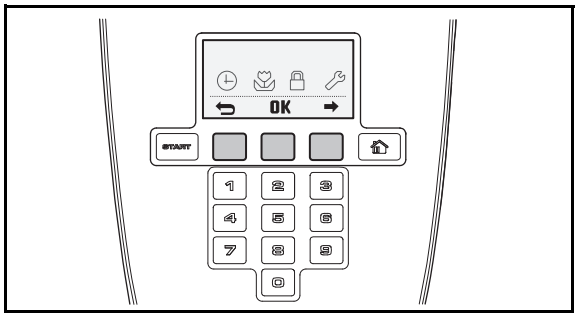
Browse the main menu and submenus using the multi-choice buttons. Enter values and times using the number keys and confirm each selection with the multi-choice button marked OK. Press the multi-choice button with the **return arrow** to go up a step in the menu or keep the **Home** button pressed in for 2 seconds to go directly back to the main menu.

Number series

A number series can be used as a shortcut to a certain function.

The first number in the series refers to the selection in the main menu. The second number corresponds to the selection in the first submenu etc.

For example: Press 2 followed by 1 in the main menu to show the Guide width submenu.

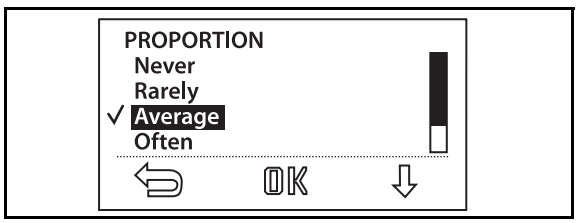


3012-985

Submenus

Certain submenus contain options that are ticked off to the left. This means that these options are selected.

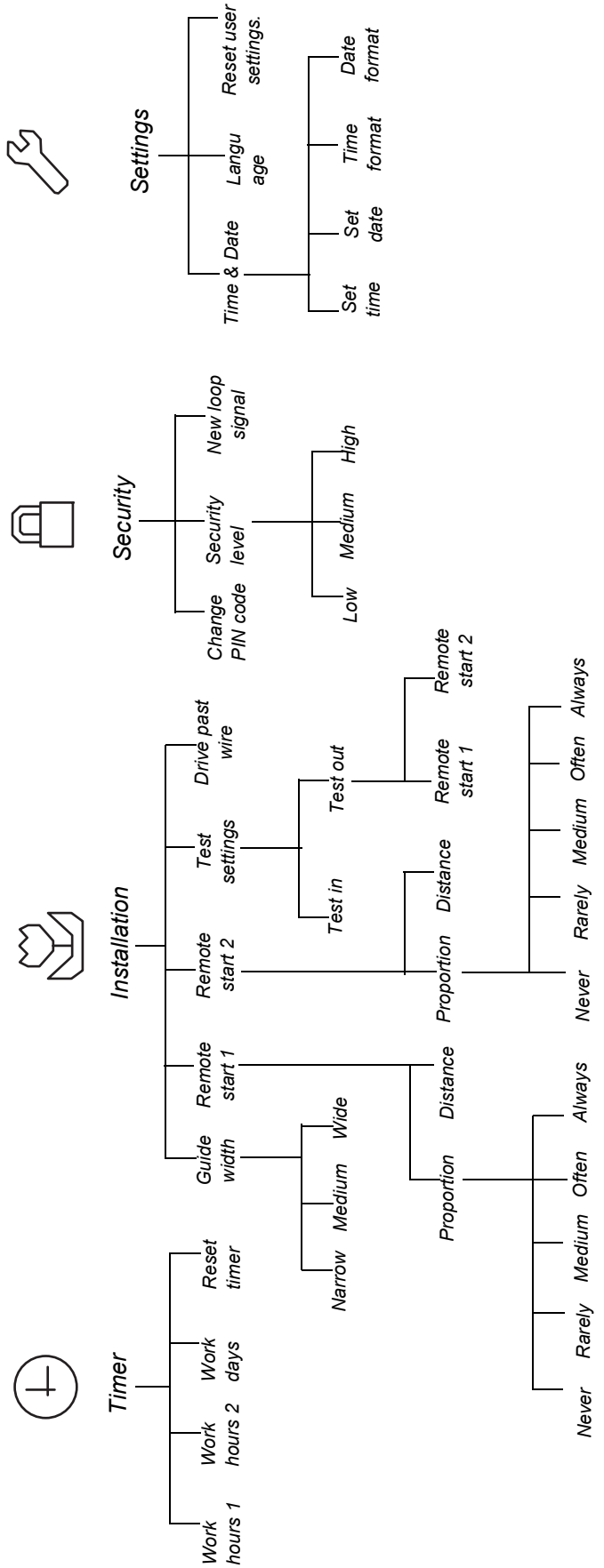
In some of the submenus there is information to the right of specific rows. This information indicates which selection has been made for the function.



3012-1004

6. MENU FUNCTIONS

6.2 Menu structure



6.3 Timer

The lawn should not be cut too often to obtain the best mowing result. Consequently, it is important to limit the operating time using the timer function if the working area is less than the robotic lawnmower's working capacity. When the robotic lawnmower is allowed to mow too much, the lawn may appear flattened. Besides, the robotic lawnmower is subjected to unnecessary wear.

The timer function is also an ideal tool to control which periods the robotic lawnmower should not mow, for example, when the children are playing in the garden.

The factory setting for the timer is 05:00-24:00 (07:00-23:00 for the Automower® 305) and it allows mowing every day of the week. This is normally a suitable setting for a working area of about 800 m² (about 500 m² for the Automower® 305).

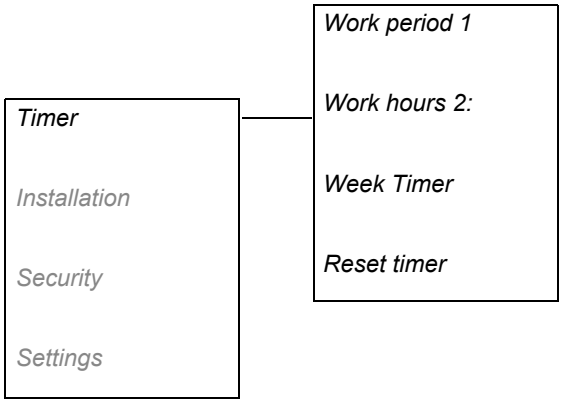
When setting the timer, calculate that the robotic lawnmower mows about 45 m² per hour and day (about 30 m² for the Automower® 305).

- ***Work hours 1***
  to set start and stop times for work hours 1. Enter each required time in hours and minutes and press **OK** to confirm the entered time.
- ***Work hours 2:***
  to set start and stop times for work hours 2. Enter each required time in hours and minutes and press **OK** to confirm the entered time.
- ***Work days***
  to select the days the robotic lawnmower must work. The robotic lawnmower will work during the days that are ticked off.
- ***Reset timer***
  reset values to the factory settings.

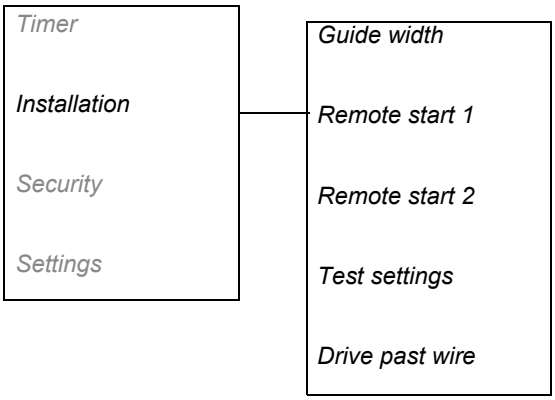
To inactivate Work hours 1 or Work hours 2, enter the time 00:00 - 00:00 to reset the timer to --:-- - --:--.

A clock symbol is displayed on the start page when the timer settings are set. The clock symbol is black when the robotic lawnmower is not allowed to mow due to a timer setting and it is white when the mower is allowed to mow.

The mower has an inbuilt standby period of about 6 hours a day (8 hours for the Automower® 305). The mower is parked in the charging station during this period. See *4.2 Using the timer* on page 36.



6.4 Installation

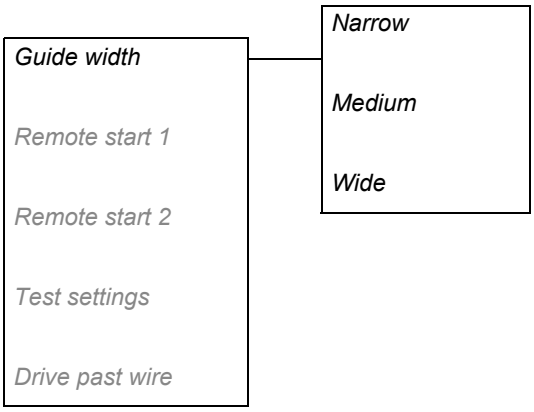


The following operating settings are available via this selection in the main menu.

- ***Guide width***
  to select the distance from the guide wire the mower is allowed to travel when it follows this to and from the charging station.
- ***Remote start 1***
  to control the robotic lawnmower so that it can easier reach remote parts of the garden.
- ***Remote start 2***
  to control the robotic lawnmower so that it can easier reach remote parts of the garden.
- ***Test settings***
  to check the above settings.
- ***Drive past wire***
  to set the distance over the boundary wire that the mower should drive.

See *7. Garden examples* for examples of garden settings.

Guide width



The guide width is a measure of how far from the guide wire the mower is allowed to travel when it follows this to and from the charging station. The area beside the wire which the mower then uses is called the Corridor.

The robotic lawnmower has a default setting for medium wide corridors. To further reduce the risk of tracks forming, it is recommended to select a wide corridor in working areas where it is possible to do so.

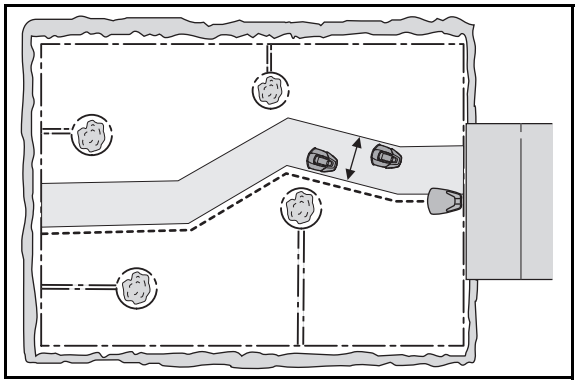
IMPORTANT INFORMATION

Always use as wide a guide width as possible. The Narrow setting must only be used when none of the other settings can be used in the working area in question.

Wide

In a wide corridor, the robotic lawnmower mows at more varied distances from the guide wire.

A garden that is open and free of narrow passages should have a wide corridor to minimise the risk of tracks forming.



3012-993

Medium

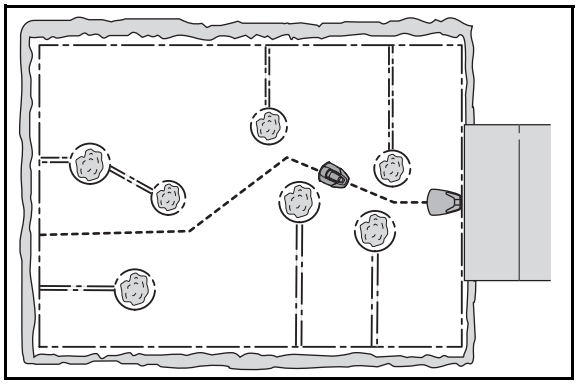
In a medium wide corridor, the robotic lawnmower travels close to and far away from the guide wire, but not as far away from the guide wire as is the case when a wide corridor is selected.

The medium corridor setting should be selected for a garden with obstacles close to the guide wire and/or passages that do not allow for a wide corridor.

Narrow

With a narrow corridor, the robotic lawnmower runs straight over the guide wire.

The Narrow corridor setting is not normally recommended, but in a garden with one or many narrow passages, a narrow corridor may be the only option. The Narrow corridor setting increases the risk for tracks forming along the guide wire.



3012-994

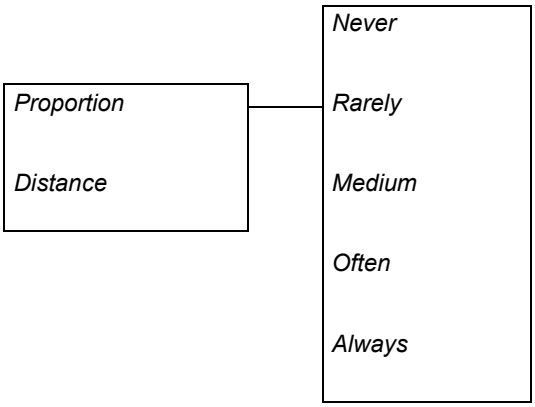
IMPORTANT INFORMATION

The distance the mower maintains from the guide wire varies depending on the layout of the working area. Use the *Test IN* function to ensure that the wide corridor setting can be used in the garden in question.

Remote start 1

One important function with the guide wire is the capacity to steer the mower to remote garden areas when required. This function is very useful in gardens where, for instance, the front and back are joined by a narrow passage.

With this function activated, (any option other than *Never* is selected) the mower will at times follow the guide wire from the charging station to the remote area and begin cutting there.



- *Proportion*
  How often the mower must follow the guide wire from the charging station is selected as a proportion of the total number of times it leaves the charging station. At all other times, the mower leaves the charging station in the standard manner and starts to cut.

The following five options can be selected;

- Never (0%)
- Rarely (approx. 20%)
- Medium (approx. 50%)
- Often (approx. 80%)
- Always (100%)

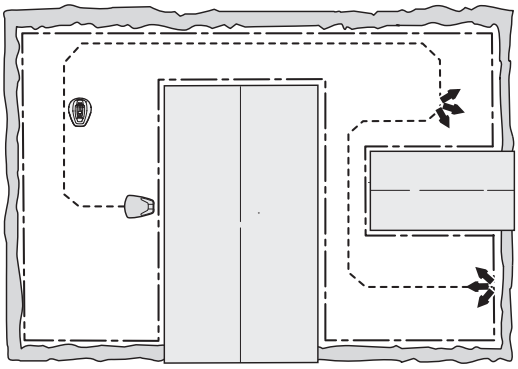
Select the percentage that corresponds to the size of the remote area relative to the total working area. If the remote area is for instance less than half of the total working area, then Rarely must be selected. If the remote area is for instance half of the total working area, Medium must be selected. Compare with the examples in *7. Garden examples* on page 53.

The default setting is Rarely.

- *Distance*
  Enter the distance in metres along the guide wire from the charging station to the remote area where the mower begins mowing.
  Tips! Use the *Test OUT* function to determine how far it is to the remote area. The distance, stated in metres, will be shown in the mower display.

Remote start 2

If the working area contains two remote areas, the guide wire should be installed so that it reaches both areas. *Remote start 1* and *Remote start 2* can then be combined to steer the robotic lawnmower to each area.



3018-095

The settings for *Proportion* and *Distance* are carried out in the same way as for *Remote start 1.*

The default setting is *Never*.

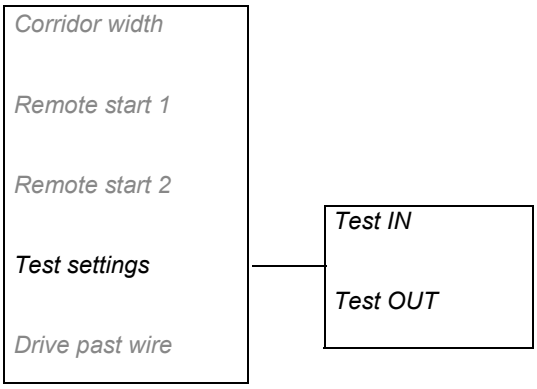
Take into account that the total figure for *Proportion* cannot exceed 100%. For example, if Often is selected for *Remote start 1*, then only *Never* or *Rarely* can be selected for *Remote start 2*.

The guide width is the same for *Remote start 1* and *Remote start 2.* In this way, it is the narrowest passage along the guide wire that limits the maximum guide width.

6. MENU FUNCTIONS

Test settings

In the *Test settings* menu, it is possible to test settings for *Remote start 1* and that the selected guide width works for the garden in question.



Test OUT

The *Test OUT* function is used to test exit settings and to calculate the distance from the charging station to a remote area.

To test the settings in *Remote start 1*:

Dock the robotic lawnmower in the charging station and select *Test OUT*. The mower will then leave the charging station straight away along the guide wire and begin mowing after the designated distance.

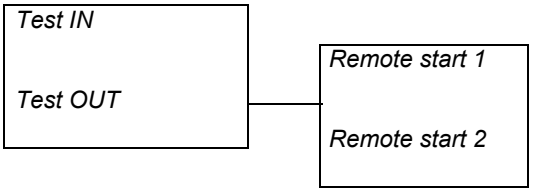
If there is a passage that the mower cannot get through, the settings in Guide width (2-1) ought to be changed from *Wide* to *Medium*. If required, the setting can also be changed to *Narrow*. The Narrow guide width setting should only be used if none of the other settings work for this installation. When the *Test OUT* function is activated, the mower travels the farthest distance from the wire allowed by the selected guide width.

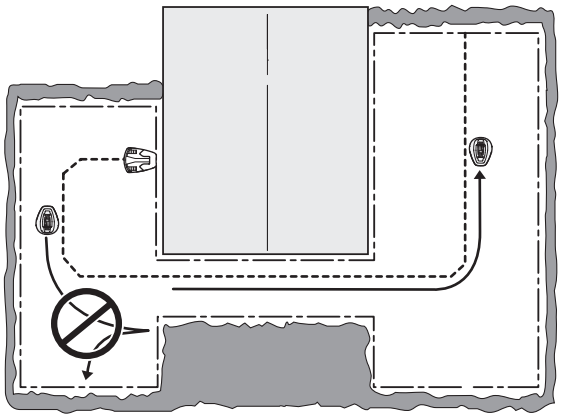
The figure here shows how the robotic lawnmower travels through a passage when *Guide width* is set to *Medium* and not to *Wide*.

How to measure the distance from the charging station to a remote area:

Enter a distance which beyond any doubt exceeds the real figure. The maximum distance that can be entered is 500 metres. Dock the robotic lawnmower in the charging station and select *Test OUT*. The robotic lawnmower will immediately leave the charging station. The distance, stated in metres, will be shown in the mower display as the mower operates. Stop the robotic lawnmower at the required position and note the distance. Enter the displayed number of metres in the *Distance* field for the working area in question.

If *Remote start 2* has been activated, i.e. if another option other than *Never* has been selected for *Proportion*, these settings must also be tested. *Remote start 2* test is performed in the same way as for *Remote start 1*.





3018-084

Test IN

The *Test IN* function allows you to test how well the robotic lawnmower docks with the charging station.

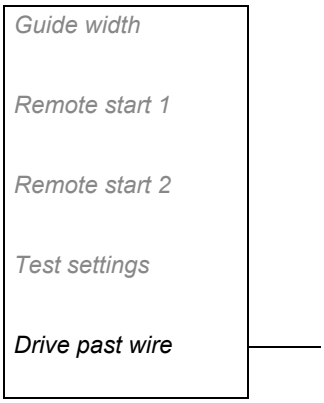
Test IN can only be performed after *Test OUT* has been performed.

Selecting this function causes the mower to travel directly along the guide wire towards the charging station and docks with it. The test is approved only if the mower is able to dock with the charging station at the first attempt. If the mower is unable to dock on the first attempt, it will automatically try again. The installation is not approved if the mower needs two or more attempts to dock with the charging station.

Drive past wire

The front of the mower always passes the boundary wire by a specific distance before the mower turns. The default distance is 25 cm, but this can be changed if required. The minimum value is 25 cm and the maximum value is 30 cm.

Now specify the number of centimetres you want the mower to pass the boundary wire and press OK.



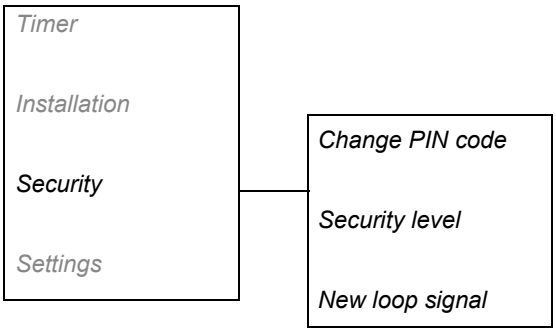
6.5 Security

Through this selection, settings relating to security and the connection between the mower and the charging station can be made.

Change PIN code

Enter the new PIN code and press **OK**. Enter the same code again and confirm by pressing **OK**. When the PIN code is changed, a message stating that the PIN code has been changed appears in the display momentarily.

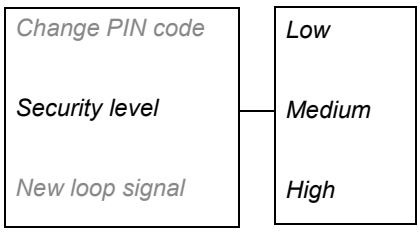
Make a note of the new PIN code on the designated line in *Memo* on page 4.



6. MENU FUNCTIONS

Security level

There are three security levels to choose from: low, medium and high Low and medium security prohibits access to the robotic lawnmower if the PIN code is unknown. High security also includes a warning that beeps if the correct PIN code is not entered after a designated time period.



Function	*Low*	Medium	*High*
Time lock	X	X	X
PIN request		X	X
Alarm			X

IMPORTANT INFORMATION

We recommend using the High security level at all times.

Time lock

This function means that the robotic lawnmower cannot be started after 30 days without first entering the correct PIN code. When the 30 days has passed the robotic lawnmower will continue to mow as normal, but the *Enter PIN code* message appears when the cover is opened. Enter your code again and press **OK**.

PIN request

This function means that the mower requests a PIN code when the main switch is set to *1* and each time the cover is opened. The correct PIN code must be entered to use the mower.

If the wrong PIN code is entered 5 times in succession the mower is blocked for a time. The blockage time is extended for every new incorrect attempt.

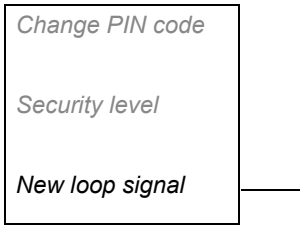
Alarm

This function means that an alarm sounds if the PIN code is not entered within 10 seconds after the **STOP** button has been pressed or the mower has been lifted up for any reason. A ticking noise indicates that the PIN code must be entered to prevent triggering the alarm. The alarm can be turned off at any time by entering the correct PIN code.

New loop signal

The loop signal is randomly selected to create a unique link between the mower and the charging station. In rare cases, there may be a need to generate a new signal, for instance if two adjacent installations have a very similar signal.

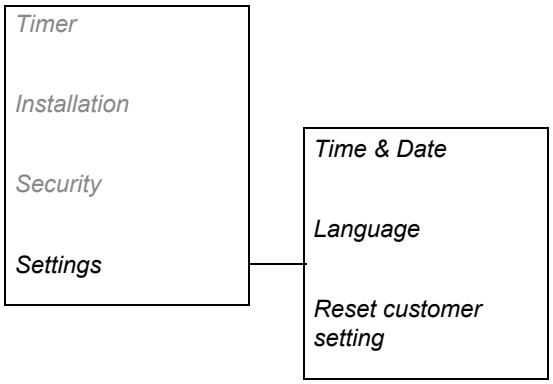
- Put the mower in the charging station.
- Select *New loop signal* in the menu and press **OK**.



6.6 Settings

The following operating settings are available via this selection in the main menu.

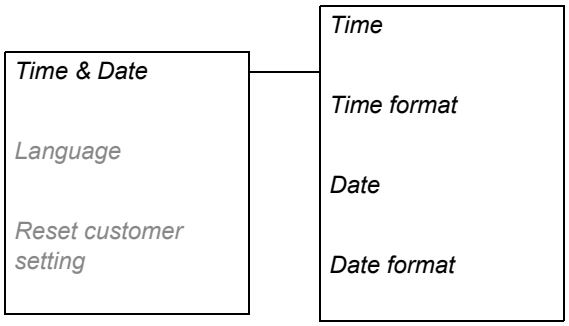
- *Time & Date*
  to set the current time and date, and the required time and date format.
- *Language*
  to select the menu language.
- *Reset user settings*
  to reset the mower to the settings it had when it left the factory.



Time & Date

This function allows you to set current time and required time format in the robotic lawnmower.

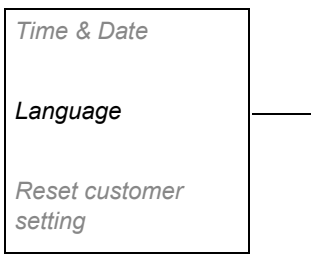
- *Time*
  Enter the correct time and press OK to exit.
- *Time format*
  Place the cursor at the required time format: 12h 24h. Press OK to exit.
- *Date*
  Enter correct date and press OK to exit.
- *Date format*
  Place the cursor at the required date format:
  YYYY-MM-DD (year-month-day)
  MM-DD-YYYY (month-day-year)
  DD-MM-YYYY (day-month-year).
  Exit by pressing OK.



Language

Set language with this function.

To select the language: Place the cursor at Language and press **OK**. Place the cursor at the required language and press **OK**.

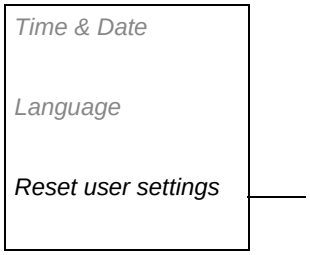


6. MENU FUNCTIONS

Reset user settings

This function allows you to reset the robotic lawnmower to the default settings the mower had when it left the factory.

- Select *Reset user settings* in the menu and press **OK**. Enter the correct PIN code and press **OK**.



7. Garden examples

- Installation proposals and settings

The mower's behaviour is controlled to a certain extent by what settings are made. Adapting the mower's garden settings according to the shape of the garden makes it easier for the mower to frequently reach all parts of the garden and in doing so achieve a perfect mowing result.

Different gardens require different settings. The following pages outline a number of examples of gardens with installation proposals and settings.

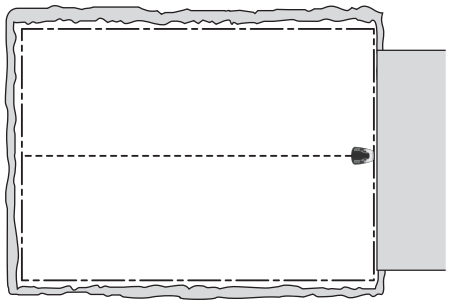
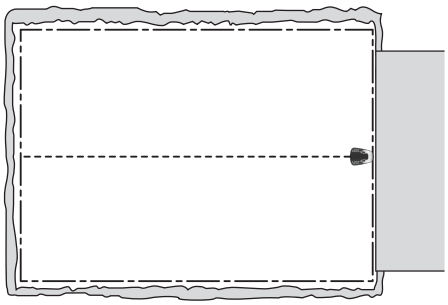
There are more garden examples on www.automower.com.

See chapter *6. Menu functions* for more detailed information about the various settings.

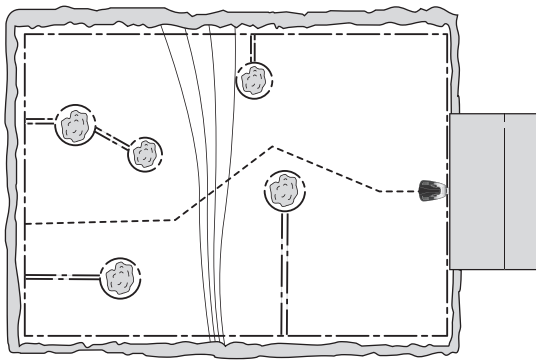
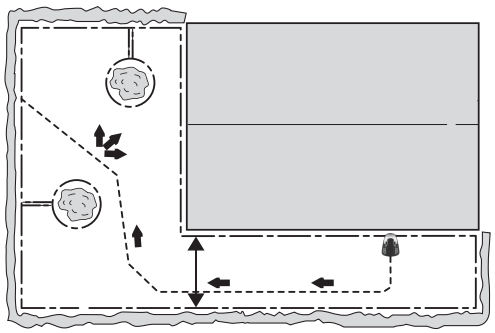
IMPORTANT INFORMATION

The default setting for the robotic lawn mower has been chosen to work in as many different gardens as possible. The settings only need to be adjusted when special installation conditions exist.

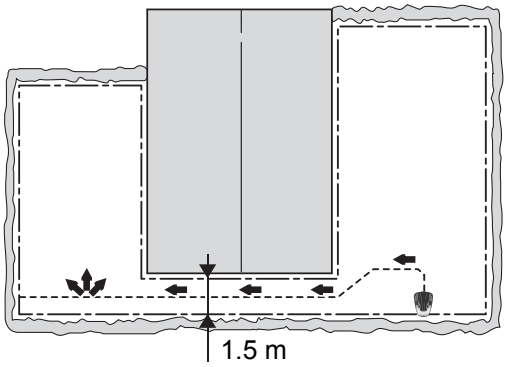
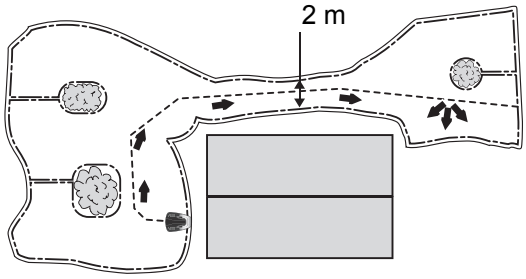
The recommended timer settings in the following garden examples are applicable to the Automower® 305 unless otherwise stated. For the Automower® 308 the operating time can be reduced. See *4.2 Using the timer* on page 36.

Installation proposals and settings		
Area	150 m². Open and level area.	 3012-979
Timer	07:00-17:00 Monday, Tuesday, Wednesday, Friday	
Proportion	*Never*	
Guide width	*Wide*	
Remarks	The timer should be used to prevent the grass looking trampled since the area is less than the maximum capacity of the mower.	
Area	500 m². Open area.	 3012-979
Timer	07:00-23:00 (factory setting) Monday-Sunday	
Proportion	*Never*	
Guide width	*Wide*	
Remarks	*Open area without difficult obstacles.*	

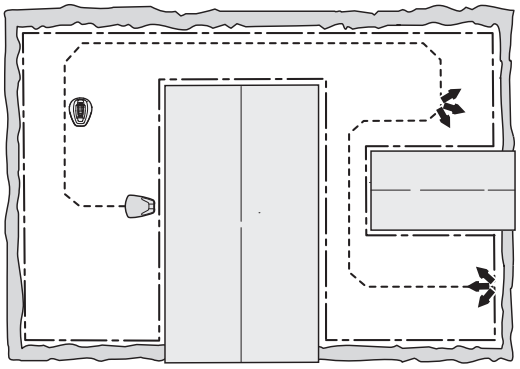
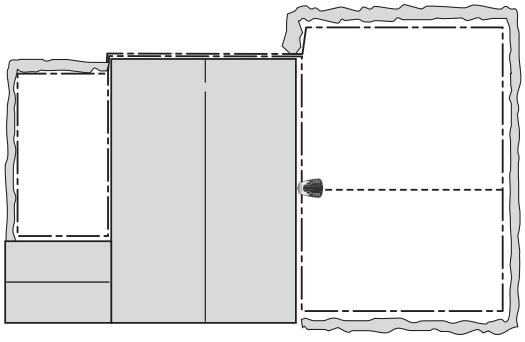
7. GARDEN EXAMPLES

Installation proposals and settings		
Area	500 m². A number of islands and a 25% slope.	 3012-977
Timer	07:00-23:00 (factory setting) Monday-Sunday	
Proportion	*Rarely* (factory setting)	
Guide width	*Medium*	
Remarks	Place the charging station in the lower part of the working area. Lay the guide wire at an angle over the steep slope.	
Area	200 m². L-shaped garden with charging station installed in the narrow area. Contains a couple of islands.	 3 m/10 ft 3012-982
Timer	07:00-23:00 Monday, Tuesday, Wednesday, Friday	
Proportion	*Often*	
Guide width	*Medium*	
Remarks	As most of the working area can easily be reached by the mower following the guide wire out from the charging station, select *Proportion*: *Often*.	

7. GARDEN EXAMPLES

Installation proposals and settings		
Area	250 m². U-shaped garden linked with a narrow passage.	 3012-980
Timer	07:00 - 23:00 Monday - Friday	
Proportion	*Medium*	
Guide width	*Medium*	
Remarks	The guide wire must be placed along the narrow passage to ensure the mower can with ease locate the charging station from the left hand side of the working area. The *Proportion Medium* is selected as the left hand area is nearly half of the total area. *Medium.*	
Area	150 m². Unsymmetrical working area with a narrow passage and a number of islands.	 3012-978
Timer	07:00-17:00 Monday, Tuesday, Wednesday, Friday	
Proportion	Rarely (factory setting)	
Guide width	*Medium*	
Remarks	The guide wire must be placed along the narrow passage to ensure the mower can with ease locate the charging station from the right hand side of the working area. Select *Proportion Rarely* as the right hand area is a small fraction of the total area. *Rarely*.	

7. GARDEN EXAMPLES

Installation proposals and settings		
	Only applicable to the Automower® 308	
Area	400 m². Three areas linked with two narrow passages.	
Timer	06:00-22:00 Monday, Tuesday, Thursday, Friday	
Proportion Remote start 1	*Rarely*	
Proportion Remote start 2	*Rarely*	3018-064
Guide width	*Medium*	
Remarks	As the working area contains three areas linked by two narrow passages, Remote start 1 and Remote start 2 must be used to obtain an even mowing result across the entire working area.	
Area	200 m² + 50 m² in a secondary area.	
Timer	07:00-18:00 Monday, Tuesday, Thursday, Friday	
Proportion	*Never*	
Guide width	*Wide*	
Remarks	The secondary area is cut using the MAN mode on Wednesday and Saturday.	3018-064

8. Maintenance

Check and clean the Husqvarna robotic lawnmower regularly and replace worn parts if necessary to improved operating reliability and to ensure a longer service life. For more information on cleaning, see *8.4 Cleaning* on page 58.

When the robotic lawnmower is first used, the blade disc and blades should be inspected once a week. If the amount of wear during this period has been low, the inspection interval can be increased.

It is important that the blade disc rotates easily. The edges of the blades should not be damaged. The lifetime of the blades varies immensely and depends for instance on:

- Operating time and size of the working area.
- Type of grass.
- Type of soil.
- The presence of objects such as cones, windfalls, toys, tools, stones, roots and the like.

The normal life is 1 to 3 months when used in areas more than 300 m² in size and longer for smaller areas. See *8.7 Blades* on page 60 on how to replace the blades.

IMPORTANT INFORMATION

Working with dull blades gives a poorer mowing result. The grass is not cut cleanly and more energy is needed resulting in the robotic lawnmower not mowing such a large area.

8.1 Winter storage

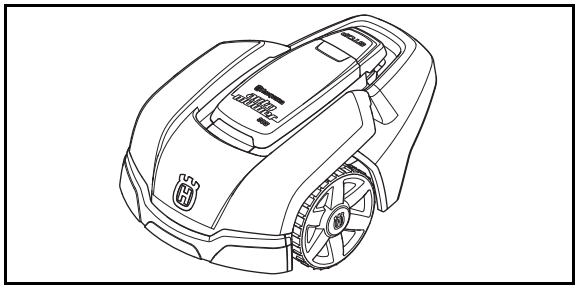
Robotic lawnmower

The robotic lawnmower must be cleaned carefully before putting it away for the winter. See *8.4 Cleaning* on page 58.

Charge the battery fully before winter storage. Then set the main switch to *0*.

Check the condition of wear items such as blades and bearings in the rear wheel. Rectify if necessary to make sure the mower is in good condition prior to next season.

Store the mower upright in a dry area free from frost, preferably in the mower's original packaging.

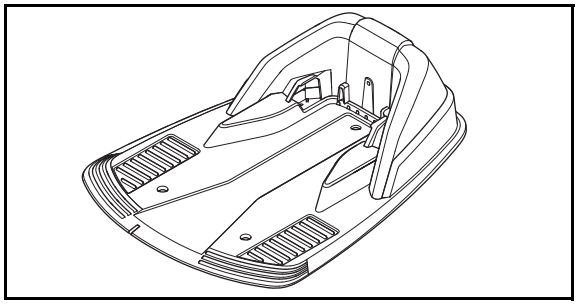


3012-964

8. MAINTENANCE

Charging station

Store the charging station and transformer indoors. The boundary wire and the guide wire can be left in the ground. The ends of the wires should be protected from damp by putting them in a container with grease for instance.



3012-965

8.2 Service

Leave your robotic lawnmower with a dealer for service prior to winter storage. This is essential in order to keep the robotic lawnmower in good condition.

Service usually includes the following:

- Thorough cleaning of the body, the chassis, the blade disc and all other moving parts.
- Testing of the mower's function and components.
- Checking and if required replacement of wear items such as blades and bearings.
- Testing the mower's battery capacity as well as a recommendation to replace battery if necessary.
- If necessary the dealer can also load the robotic lawnmower with new software, including new features where applicable.

8.3 After winter storage

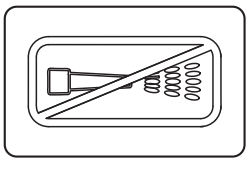
Check whether the robotic lawnmower, contact strips or charging strips need to be cleaned before using. If the charging or contact stripes appear to be burnt, clean them using fine grade emery cloth. Check also that the robotic lawnmower’s time and date are correct.

8.4 Cleaning

It is important to keep the robotic lawnmower clean. A mower with large amounts of grass stuck to it will not cope as well with slopes. It is recommended to clean using a brush and a spray bottle with water.

IMPORTANT INFORMATION

Never use a high-pressure washer or even running water to clean the robotic lawnmower. Never use solvents for cleaning.

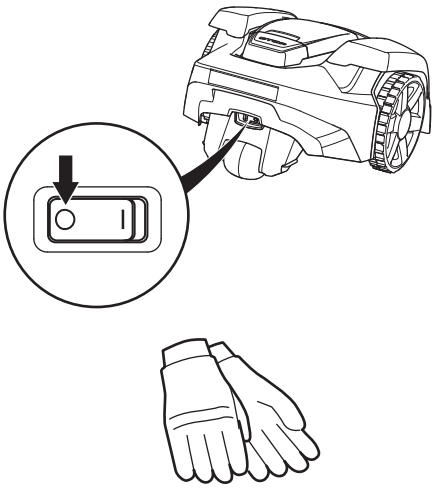


3018-062

8. MAINTENANCE

Chassis and blade disc

1. Set the main switch in position *0*.
2. Wear protective gloves.
3. Lift the robotic lawnmower onto its side.

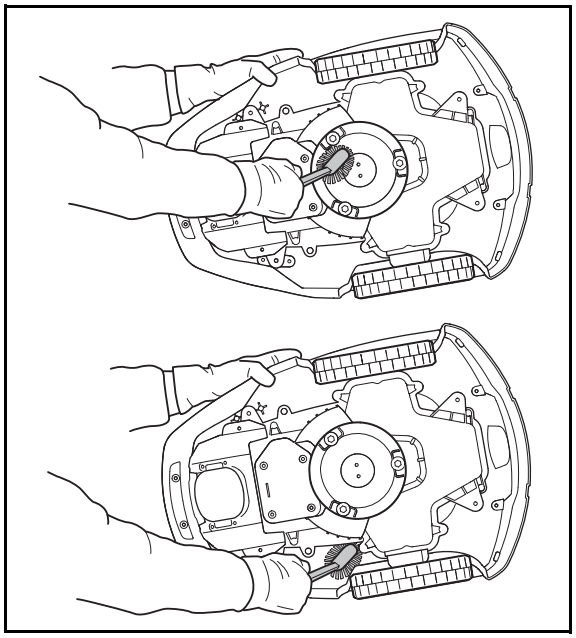


3012-1023
3012-272

4. Clean the blade disc and chassis using e.g. a dish brush.

   At the same time, check that the blade disc rotates freely in relation to the foot guard.

   If long blades of grass or other objects find their way in, these may impede the blade disc. Even a slight braking effect leads to a higher consumption of energy and longer mowing times, and at the worst will prevent the mower from being able to mow a large lawn. The blade disk must be removed to carry out a more thorough cleaning. If necessary, contact your dealer.



3012-973
3012-974

Chassis

Clean the underside of the chassis. Brush or wipe with a damp cloth.

Wheels

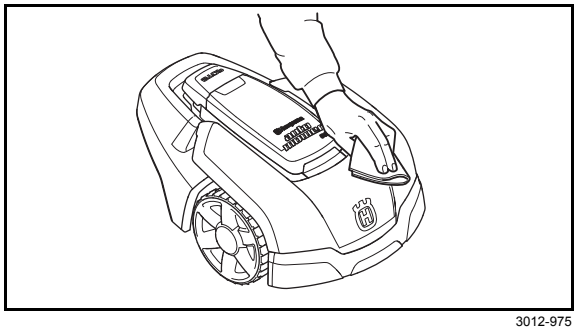
Clean around the front wheels and rear wheel as well as the rear wheel bracket.

Body

Use a damp, soft sponge or cloth to clean the body. If the body is very dirty it may be necessary to use a soap solution or washing-up liquid.

Charging station

Clean the charging station regularly from grass, leaves, twigs and other objects that may impede docking.



3012-975

8. MAINTENANCE

8.5 Transport and removal

Secure the machine during transport. It is important that the robotic lawnmower is kept still when it is being moved, for instance, between lawns.

8.6 In the event of a thunderstorm

To reduce the risk of damage to components in the robotic lawnmower, we recommend that all connections to the charging station are disconnected (power supply, boundary wire and guide wire) if there is a risk of a thunderstorm.

8.7 Blades

WARNING

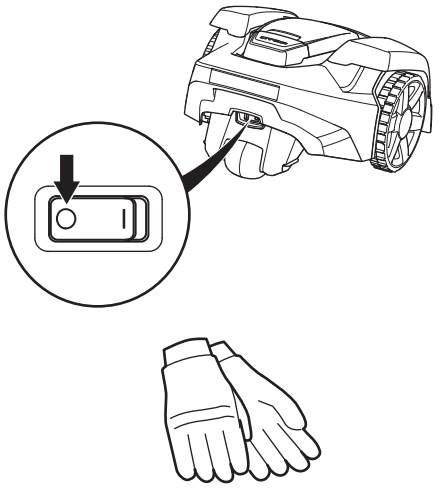
Always use original blades and screws when replacing. Only replacing the blades and reusing the screw can result in a screw wearing during mowing and shearing. The blades can then be propelled from under the body and cause serious injury.

There are three blades on the robotic lawnmower, which are screwed into the blade disc. All three blades and screws must be replaced at the same time to obtain a balanced mowing system.

There are several different types of mower blades to choose from as accessories, with different features. Use Husqvarna AB approved blades only. Please contact your dealer for more information.

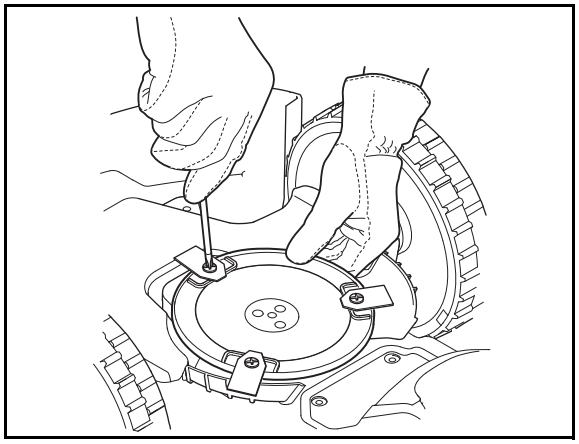
To replace the blades:

1. Set the main switch in position *0*.
2. Wear protective gloves.
3. Turn the robotic lawnmower upside down.
4. Rotate the skid plate so that its hole aligns with the screw for the blade. Only applicable for Automower® 308.



3012-1023
3012-272

5. Remove the screw. Use a straight slot or cross-tip screwdriver.
6. Remove the blade and the screw.
7. Screw on the new blade and the new screw.



3018-087

8.8 Battery

The battery is maintenance-free, but has a limited life span of 2 to 4 years.

Battery life is dependent on the length of the season and how many hours a day the robotic lawnmower is used. A long season or many hours of use per day means that the battery must be replaced more regularly.

IMPORTANT INFORMATION

Fully charge the battery at the end of the season before winter storage.

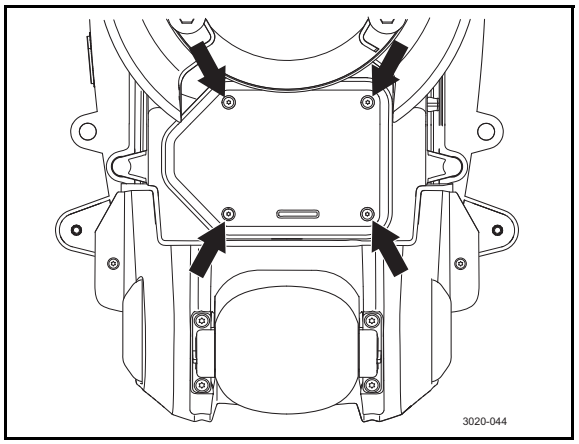
Replacing the battery

If the operating times for the mower are shorter than normal between charges, this indicates that the battery is getting old and eventually needs replacing. The battery is fine as long as the mower maintains a well-cut lawn.

IMPORTANT INFORMATION

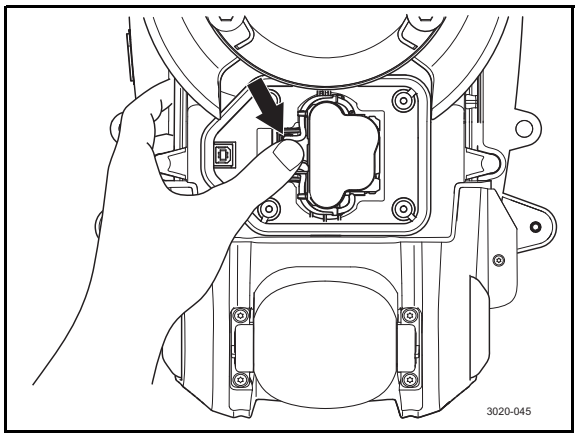
Only use Husqvarna Group AB original batteries. Compatibility with other batteries cannot be guaranteed.

1. Set the main switch in position *0*.
2. Turn the mower upside down.
3. Clean around the battery cover.
4. Unscrew the four screws to the battery cover (Torx 20) and remove the battery cover.



3020-044

5. Pull out the battery by pulling on the strap.
6. Set the main switch in position *0*.
7. Turn the mower upside down.
8. Fit a new Husqvarna original battery. NOTE! Press on the contact strip to fit the battery in place.
9. Fit the battery cover. The sealing strip is reusable and does not have to be replaced.
10. Screw in place the four screws for the battery cover (Torx 20).



3020-045

9. Troubleshooting

In this chapter, a number of messages are listed which may be shown in the display if there is a malfunction. There is a proposal as to the cause and steps to take for each message.

This chapter also presents some symptoms that can guide you if the mower does not work as expected.

More suggestions for steps to take in the event of malfunction or symptoms can be found on www.automower.com.

9.1 Messages

Below we have listed a number of messages which may be shown in the display of the Husqvarna robotic lawnmower. Contact your dealer if the same message appears often.

Message	Cause	Action
Wheel motor blocked, left	Grass or other object has wrapped around the drive wheel.	Check the drive wheel and remove the grass or other object.
Wheel motor blocked, right	Grass or other object has wrapped around the drive wheel.	Check the drive wheel and remove the grass or other object.
Cutting system blocked	Grass or other object has wrapped around the blade disc.	Check the blade disc and remove the grass or other object.
	The blade disc lies in a pool of water.	Move the mower and if possible prevent the collection of water in the working area.
No loop signal	The transformer is not connected.	Check the wall socket connection and whether an earth-fault breaker has tripped. Check that the low voltage cable is connected to the charging station.
	The boundary wire is not connected to the charging station.	Check that the boundary wire connector is fitted properly to the charging station. See *3.5 Connecting the boundary wire* on page 28.
	Boundary wire broken.	Search interrupted, see *9.4 Finding breaks in the loop wire* on page 69. Replace the damaged section of the loop with a new loop wire and splice using an original coupler.
	The boundary wire is laid in the wrong direction around an island.	Check that the boundary wire has been laid according to the instructions in chapter *3. Installation*.
	The connection between the robotic lawnmower and the charging station has been broken.	Place the robotic lawnmower in the charging station and generate a new loop signal via Security -> *New loop signal*.
	Disturbances from metal objects (fences, reinforcement steel) or buried cables close by.	Try moving the boundary wire.

9. TROUBLESHOOTING

Message	Cause	Action
Trapped	The robotic lawnmower has got caught in something.	Free the robotic lawnmower and rectify the reason for it becoming trapped.
	The robotic lawnmower is stuck behind a number of obstacles.	Check if there are any obstacles which make it hard for the robotic lawnmower to move on from this location.
Outside working area	The boundary wire connections to the charging station are crossed.	Check that the boundary wire is connected correctly.
	The boundary wire is too close to the edge of the working area.	Check that the boundary wire has been laid according to the instructions in chapter *3. Installation*.
	The working area slopes too much.	Check that the boundary wire has been laid according to the instructions in chapter *3. Installation*.
	The boundary wire is laid in the wrong direction around an island.	Check that the boundary wire has been laid according to the instructions in chapter *3. Installation*.
	Disturbances from metal objects (fences, reinforcement steel) or buried cables close by.	Try moving the boundary wire.
	The robotic lawnmower finds it hard to distinguish the signal from another robotic lawnmower installation close by.	Place the robotic lawnmower in the charging station and generate a new loop signal via *Security -> New loop signal.*
Low battery	The robotic lawnmower cannot find the charging station.	Check that the charging station and the guide wire are installed in accordance with the instructions, see *3. Installation* on page 16.
	The guide wire is broken or not connected.	Check that the indicator lamp in the charging station flashes yellow. See the solution in *9.2 Indicator lamp in the charging station* on page 66.
	The battery is spent.	Replace the battery. See *8.8 Battery* on page 61.
	The charging station's antenna is defective.	Check if the indicator lamp in the charging station flashes red. See the solution in *9.2 Indicator lamp in the charging station* on page 66.
Wrong PIN	Wrong PIN code has been entered. Five attempts are permitted, and the keypad is then blocked for five minutes.	Enter the correct PIN code. Contact the local dealer if you forget the PIN code.

9. TROUBLESHOOTING

Message	Cause	Action
No drive	The robotic lawnmower has got caught in something.	Free the mower and rectify the reason for the lack of drive. If it is due to wet grass, wait until the lawn has dried before using the mower.
	The working area includes a steep slope.	Maximum guaranteed slope is 25%. Steeper slopes should be isolated. See *3.4 Installation of the boundary wire* on page 22.
	The guide wire is not laid at an angle on a slope.	If the guide wire is laid on a slope, it must be laid at an angle across the slope. See *3.6 Installation of the guide wire* on page 29.
Charging station blocked	The contact between the charging strips and contact strips may be poor and the robotic lawnmower has made a number attempts to charge.	Put the robotic lawnmower in the charging station and check that the charging strips and contact strips make good contact.
	An object is obstructing the robotic lawnmower.	Remove the object.
Stuck in charging station	There is an object in the way of the robotic lawnmower preventing it from leaving the charging station.	Remove the object.
Upside down	The robotic lawnmower is leaning too much or has turned over.	Turn the mower the right way up.
Needs manual charging	The robotic lawnmower is set in the *MAN* operating mode.	Put the mower in the charging station. This behaviour is normal and no action is required.
Next start hh:mm	The timer setting prevents the mower from operating.	Change the timer settings. See *6.3 Timer* on page 44.
	The rest period is in progress. The robotic lawnmower must dock in the charging station for at least 6 hours a day (8 hours for the Automower® 305).	This behaviour is normal and no action is required.
The day's mowing is complete	The rest period is in progress. The robotic lawnmower must dock in the charging station for at least 6 hours a day (8 hours for the Automower® 305).	This behaviour is normal and no action is required.

9. TROUBLESHOOTING

9.2 Indicator lamp in the charging station

For a fully functional installation, the indicator lamp in the charging station must emit a solid green light. If something else appears, follow the troubleshooting guide below.

There is more troubleshooting help on www.automower.com. If you still need help with troubleshooting, please contact the local dealer.

Light	Cause	Action
Solid green light	Everything in order	No action required
Blue flashing light	The boundary wire is not connected to the charging station	Check that the boundary wire connector is fitted properly to the charging station. See *3.5 Connecting the boundary wire* on page 28.
	Break in the boundary wire.	Find out where the break is. Replace the damaged section of the boundary wire with a new loop wire and splice using an original coupler.
Yellow flashing light	The guide wire is not connected to the charging station	Check that the guide wire connector is properly connected to the charging station. See *3.6 Installation of the guide wire* on page 29.
	Break in the guide wire	Find out where the break is. Replace the damaged section of the guide wire with a new loop wire and splice using an original coupler.
Red flashing light	Interruption in the charging station's antenna	Contact the local dealer.
Solid blue light	Weak signal as the boundary wire is too long. Max length is 250 metres.	No steps have to be taken if the mower operates as expected.
		Shorten the boundary wire by reducing the working area or replacing islands with barriers the mower can collide with.
	Weak signal due to damaged boundary wire	Since it is difficult to locate where the wire is damaged it is recommended to lay a new boundary wire for the entire working area.
Solid red light	Defective circuit board in the charging station	Contact the local dealer.

9. TROUBLESHOOTING

9.3 Symptoms

If your Automower® does not work as expected, follow the troubleshooting guide below.

There is a FAQ (Frequently Asked Questions) on www.automower.com which provides more detailed answers to a number of standard questions. It you still cannot find the reason for the fault, contact the local dealer.

Symptoms	Cause	Action
The robotic lawn mower has difficulty docking with the charging station	The boundary wire is not laid in a long straight line that is far enough out from the charging station.	Check that the charging station has been installed according to the instructions in *3.2 Installation of the charging station* on page 17.
	The guide wire is not inserted in the slot at the bottom of the charging station.	It is absolutely critical for operation that the guide wire is perfectly straight and is in the correct position under the charging station. Therefore make sure that the guide wire is always in its slot in the charging station. See *3.6 Installation of the guide wire*.
	The charging station is on a slope	Place the charging station on a surface that is entirely level. See *3.2 Installation of the charging station* on page 17.
Uneven mowing results	The robotic lawnmower works too few hours per day.	Increase the mowing time. See *6.3 Timer* on page44.
	The proportion setting is incorrect in relation to the layout of the working area	Check that the correct Proportion value is selected. See *6.4 Installation* on page 45.
	The shape of the working area requires the use of both *Remote start* 1 and *Remote start 2* for the robotic lawnmower to find its way to all remote areas.	Also use *Remote start 2* to steer the robotic lawnmower to a remote area. See *6.4 Installation* on page 45.
	Working area too large.	Try limiting the working area or extending the working time. See *6.3 Timer* on page 44.
	Dull blades.	Replace all the blades and screws so that the rotating parts are balanced. See *8.7 Blades* on page 60.
	Long grass in relation to the set cutting height.	Increase the cutting height and then successively lower.
	Accumulation of grass by the blade disc or around the motor shaft.	Check that the blade disc rotates freely and easily. If not, screw off the blade disc and remove grass and foreign objects. See *8.4 Cleaning*.
The robotic lawnmower runs at the wrong time	The robotic lawnmower clock needs to be set.	Set the clock. See *6.6 Settings* on page 51.
	The start and stop times for mowing are incorrect.	Reset the start time and stop time settings for mowing. See *6.3 Timer* on page 44.

9. TROUBLESHOOTING

Symptoms	Cause	Action
The robotic lawnmower vibrates	Damaged blades lead to imbalance in the cutting system.	Inspect the blades and screws and replace them if necessary. See *8.7 Blades* on page 60.
	Many blades in the same position lead to imbalance in the cutting system.	Check that only one blade is fitted at each screw.
The robotic lawnmower runs, but the blade disc does not rotate	The robotic lawnmower searches for the charging station.	No action The blade disc does not rotate when the robotic lawnmower is searching for the charging station.
The robotic lawnmower mows for shorter periods than usual between charges	Grass or other foreign object blocks the blade disc.	Remove and clean the blade disc. See *8.4 Cleaning* on page 58.
Both the mowing and charging times are shorter than usual	The battery is spent.	Replace the battery. See *8.8 Battery* on page 61.
	This behaviour is normal at low temperatures (gradual increase below 15 °C).	No action
The robotic lawnmower is parked for hours in the charging station	Only applicable for Automower® 305: The robotic lawnmower must stand for at least 8 hours per day in the charging station in order to attain its in-built standby, see *4.2 Using the timer* on page 36.	No action
	The cover has been closed without the **START** button first being pressed.	Open the cover, press the START button and then close the cover.

9.4 Finding breaks in the loop wire

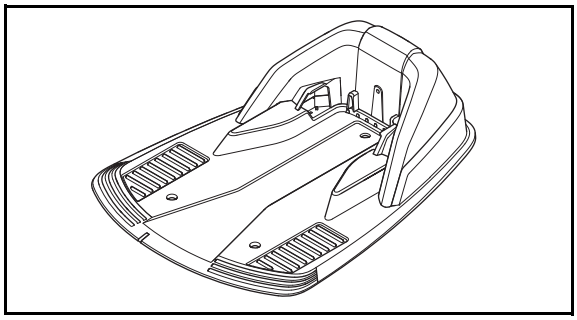
Breaks in the loop wire are usually the result of unconscious physical damage to the wire such as when gardening with a shovel. In countries with ground frost, even sharp stones that move in the ground can damage the wire. Breaks can also be due to the high tension in the wire during installation.

Mowing the grass too low right after the installation can damage wire insulation. Certain damage to the insulation may not cause disruptions until several weeks or months later. To avoid this, always select the maximum cutting height the first weeks after installation and then lower the height one step at a time every second week until the desired cutting height has been reached.

A defective splicing of the loop wire can also lead to disruptions first several weeks after the splice was done. A faulty splice can, for example, be the result of the original coupler not being pressed together hard enough with a pair of pliers, or a coupler of lower quality than original coupler has been used. Please first check all known splices before further troubleshooting is done.

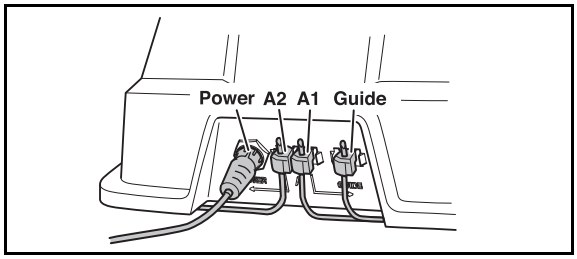
A break can be located by gradually halving the distance of the loop wire where the break may have occurred until there is only a very short section of the wire left.

1. Make sure the indicator lamp in the charging station flashes blue, which indicates a break in the boundary loop. See *9.2 Indicator lamp in the charging station* on page 66.



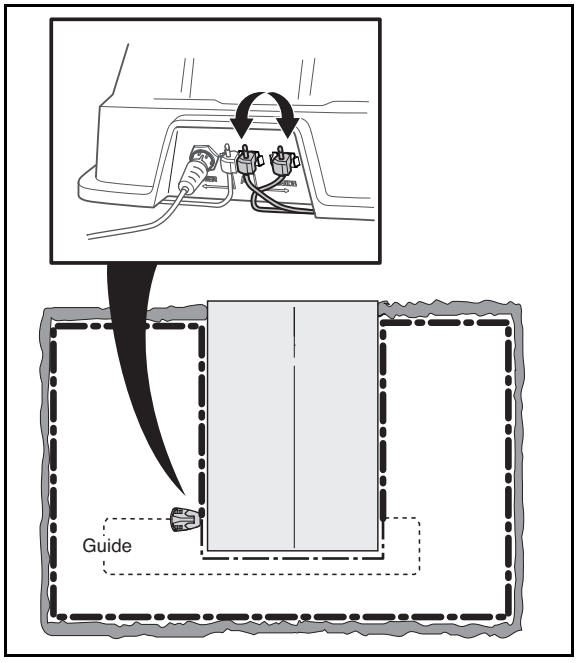
3012-965

2. Check that the boundary wire connections to the charging station are properly connected and not damaged. Check that the indicator lamp in the charging station is still flashing blue.



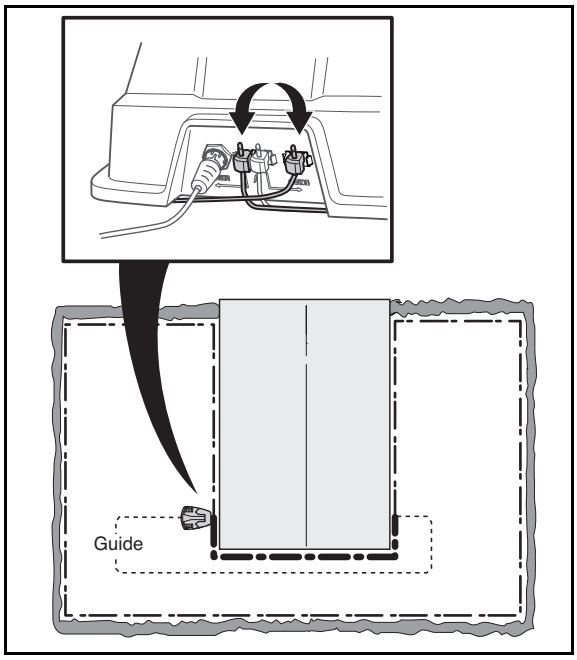
3018-049

3. Connect the charging station to the power supply. Switch the connections between the guide wire and the boundary wire in the charging station.
   a) Switch connection A1 and Guide.
   If the indicator lamp flashes yellow, then the break is somewhere on the boundary wire between A1 and the point where the guide wire is connected to the boundary wire (thick black line in the illustration).



3018-050

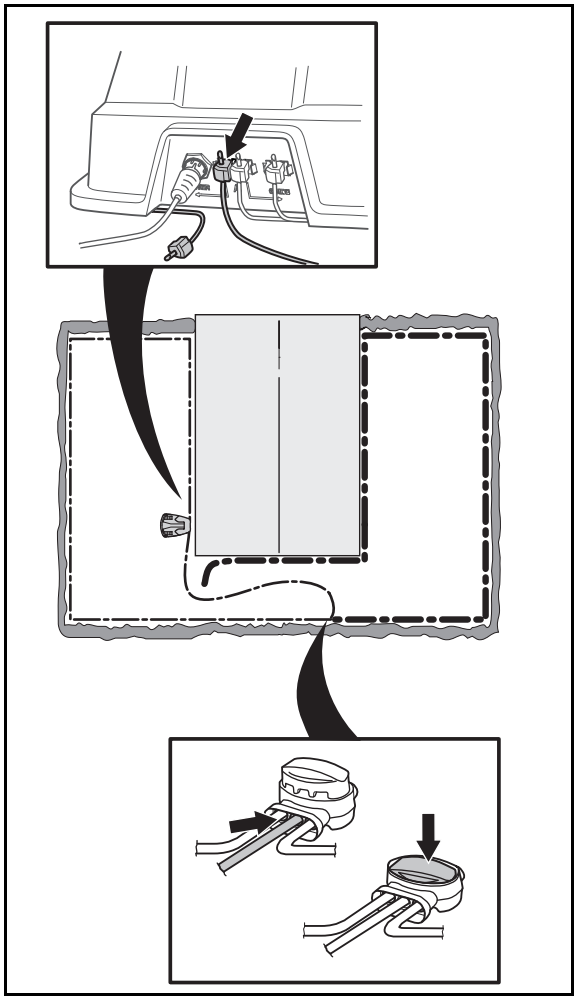
   b) Put A1 and Guide back in their original positions. Then switch A2 and Guide.
   If the indicator lamp flashes yellow, then the break is somewhere on the boundary wire between A2 and the point where the guide wire is connected to the boundary wire (thick black line in the illustration).



3018-051

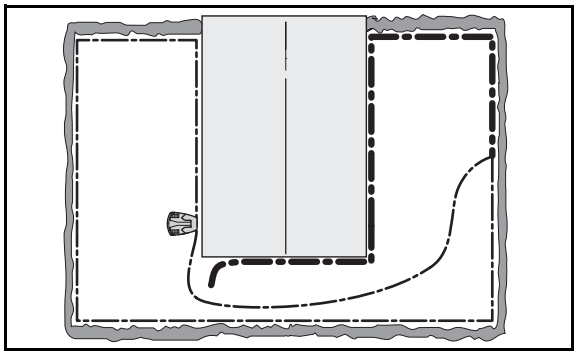
4. a) Assume that the indicator lamp flashed yellow in test a) above. Reset all connections to their original positions. Then disconnect A2. Connect a new loop wire to A2. Connect the other end of this new loop wire somewhere at the centre of the installation.

   If the indicator lamp is green or flashing yellow, then the break is somewhere in the wire between the disconnected end to the point where the new wire is connected (thick black line in the illustration below).



3018-052

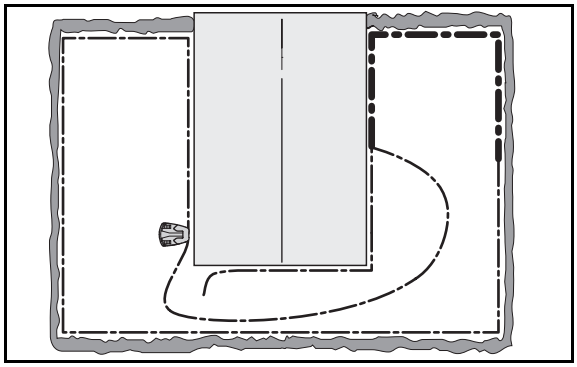
   In that case, move the connection for the new wire closer to the disconnected end (roughly at the middle of the suspected wire section) and check again if the indicator lamp is green or flashes yellow.



3018-053

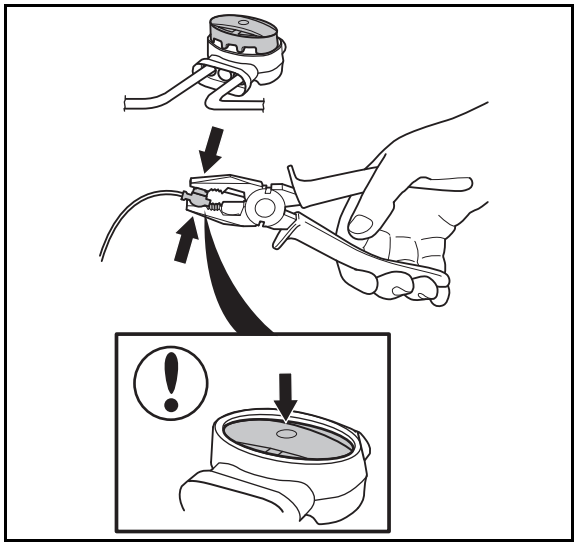
   Continue until only a very short section of the wire remains which is the difference between a flashing blue light and a solid green light.

   b) If the indicator lamp flashed yellow in test 3b) above, a similar test is carried out but with the new loop wire connected to A1 instead.



3018-054

5. When the break is found, the damaged section must be replaced with a new wire. The damaged section can be cut out if it is possible to shorten the boundary wire. Always use original couplers.



3018-055

10. Technical Data

Data	Automower® 305	Automower® 308
Dimensions		
Length	55 cm	55 cm
Width	39 cm	39 cm
Height	25 cm	25 cm
Weight	7 kg	7 kg
Electrical system		
Battery	Specialised Lithium-Ion battery, 18 V/1.6 Ah	Specialised Lithium-Ion battery, 18 V/1.6 Ah
Transformer	230 V/ 24 V	230 V/ 24 V
Mean energy consumption at maximum use	9 kWh/month for a 500 m^2 working area	15 kWh/month for a 800 m^2 working area
Noise emissions		
Measured Noise Level	58 dB (A)	61 dB (A)
Guaranteed noise level	61 dB (A)	63 dB (A)
Mowing		
Cutting system	Three pivoted cutting blades	Three pivoted cutting blades
Blade motor speed	2,900 rpm	2,900 rpm
Power consumption during cutting	20 W +/- 20%	20 W +/- 20%
Cutting height	2-5 cm	2-5 cm
Cutting width	17 cm	17 cm
Working capacity	500 m^2 +/- 20 %	800 m^2 +/- 20 %

Husqvarna AB does not guarantee full compatibility between the robotic lawnmower and other types of wireless systems such as remote controls, radio transmitters, hearing loops, underground electric animal fencing or similar.

11. Guarantee terms

Husqvarna AB guarantees this product's functionality for a period of two years (from date of purchase). The guarantee covers serious faults relating to materials or manufacturing faults. Within the guarantee period, we will replace the product or repair it at no charge if the following terms are met:

- The robotic lawnmower and the charging station may only be used in compliance with the instructions in this Operator's Manual.
- Users or non-authorised third parties must not attempt to repair the product.

Examples of faults which are not included in the guarantee:

- Damage caused by water seepage from underneath the robotic lawnmower (e.g. from washing or irrigation systems).
- Damage caused by shortened low-voltage cable.
- Damage caused by lightning.
- Damage caused by using a battery that is not an original battery.
- Damage to the loop wire.

The blades and wheels are seen as disposable and are not covered by the guarantee.

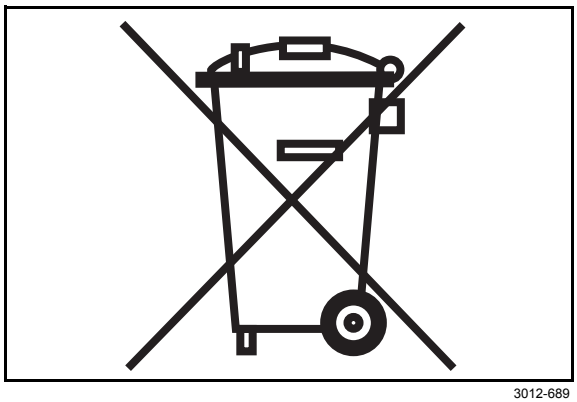
If a fault occurs with your robotic lawnmower, please contact the dealer (see Memo on page 4) for further instructions. Please have your receipt and product serial number to hand for quicker assistance.

12. Environmental information

The symbols on the Husqvarna robotic lawnmower or its packaging indicate that this product cannot be treated as domestic waste. It should instead be left at a suitable recycling centre to recycle its electronic components and batteries. Contact your dealer for a disassembly of the batteries.

By ensuring that this product is taken care of correctly, you can help to counteract the potential negative impact on the environment and people that can otherwise result through the incorrect waste management of this product.

For more detailed information about recycling this product, contact your municipality, your domestic waste service or the shop from where you purchased the product.



3012-689

13. EU Declaration of Conformity

EU Declaration of conformity (Only applies to Europe)

Husqvarna AB, SE-561 82 Huskvarna, Sweden, hereby declares under sole responsibility that the robotic lawnmowers **Husqvarna Automower® 305** and **Automower® 308** with serial numbers dating 2012 and onwards (the year is clearly stated on the rating plate, followed by the serial number), comply with the requirements of the COUNCIL'S DIRECTIVE:

- Directive "relating to machinery" **2006/42/EC**.
- Directive on "restriction of use of certain hazardous substances" 2011/65/EU
- Directive "relating to noise emissions from outdoor equipment" **2000/14/EC**.
  See also the Technical Data chapter for information regarding noise emissions and the cutting width. The registered body 0404, SMP Svensk Maskinprovning AB, Fyrisborgsgatan 3, SE-754 50 Uppsala, Sweden, has issued a report regarding the assessment of conformity according to annex VI to the Council's Directive of May 8, 2000 "relating to noise emissions into the surroundings" 2000/14/EC. The certificate is numbered: 01/901/176.
- Directive "relating to electromagnetic compatibility" **2004/108/EC** and applicable supplements. The following standards have been applied:
  - **EN 61000-6-3** (emission)
  - **EN 61000-6-2** and **EN 61000-6-1** (immunity)

Huskvarna October 1, 2012

CE

Christer Gustavsson, Development Manager robotic lawnmowers
(Authorized representative for Husqvarna AB and responsible for technical documentation)

13. EU DECLARATION OF CONFORMITY

ORIGINAL INSTRUCTIONS

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